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THE MUNICIPAL INDEX AND ATLAS used in connection with the current advertisements in THE AMERICAN CITY, places local officials in the most favorable position to obtain all types of available equipment and supplies from manufacturers who desire to serve municipal government departments. THE MUNICIPAL INDEX AND ATLAS (723 pages) is published annually by THE AMERICAN CITY MAGAZINE CORPORATION, 470 Fourth Avenue, New York 16, N. Y.

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Your Telephone uses wires and radio

Maybe you've thought of the Bell Telephone System as using only wires. It uses and pioneers in radio too.

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Work is moving right ahead on an experimental radio relay system to carry Long Distance calls and television programs between New York and Boston. A similar system is planned between the cities of Chicago and Milwaukee.

In every case the Bell System uses the kind of transmission, wire or radio, that gives best service at lowest cost.

BELL TELEPHONE SYSTEM

Our Municipal Notebook

Detroit Civic Award for Suggested Improvements in Municipal Service

ANNOUNCEMENT was made last month of an experiment on the part of municipal government in the contest field when the Mayor's Administrative Study Committee of Detroit, Mich., made known the rules and prizes of the first Detroit Civic Award. The contest was initated by the Committee in the hope that it will stimulate the city employees to examine constructively the processes of municipal government of which they are a part and to bring forth suggestions prompted by their close contact with actual operations. The contest is open to all employees of the city, including the Board of Education, with exception of the members of the Mayor's Committee, city department heads and assistants, and supervising directors and above in the school system.

The subject of the competition is: A suggestion, or plan, for improvement in the efficiency and economy of any municipal service, function, or organization. All entries will be judged on the basis of the practicability of the suggestions and the extent of improvement in efficiency and economy. A contestant may submit as many entries as he wishes and all of the entries become the property of Detroit. The first prize is $500 and there are 84 other cash awards ranging from $350 to $10. The entries will be judged by the members of the Mayor's Administrative Committee and the Business Manager of the Board of Education. Final judgment will be made by the Board of Trustees of the Detroit Bureau of Governmental Research and the prizes will be announced by the Mayor not later than April 5.

The contest was made possible by an anonymous gift advanced to the Mayor's Committee to encourage all city employees to take part in the program of appraisal and re-evaluation of municipal functions and services.

Checklist of City Reports

THE Bureau of the Census in the recent report on city documents has listed the various financial reports of municipalities throughout the country which are made available by the Municipal Reference Service of the Bureau's Governments Division. The report stresses the steady improvement in municipal reporting which has been given impetus by the citizens' demand for better governmental accounting and fiscal audits. Public reporting has gained importance as more and more officials recognize its value as a medium of stimulating civic interest and promoting intelligent participation in public administration.

A large collection of current city documents is maintained by the Municipal Reference Service and the painstaking bibliography issued in this report shows the extent of the reference work in cities throughout the country. The documents are listed alphabetically by state and, under each state, alphabetically by city and issuing department. The date of the close of the fiscal year and the population are shown for each city. Departmental reports published in a collected edition or in consolidated annual reports are also listed. Some of the reports are not available for distribution on application to the city, but the documents on file in the Municipal Reference Service may be borrowed on a three-week loan basis. The list is quite comprehensive and should be of great help to officials and others.

Victory Garden Institute's Peacetime Program

IN RESPONSE to demands from garden leaders and others familiar with the important part the National Victory Garden Institute played during the war, the officers and trustees of the Institute decided at the annual meeting held recently to carry on the work, but along broader lines. The name will be changed to National Garden Institute and many of the activities which proved so successful during the war will be continued and new ones added to broaden the gardening service of the organization. This year the emphasis will be once again on food because, as President Truman pointed out in a telegram endorsing the program, "Food is still one of the most vital weapons in securing a lasting and stable peace."

Lloyd C. Stark, Louisiana, Mo., is Chairman of the Board; M. L. Wilson, Director of Extension Division, United States Department of Agriculture, Washington, D. C., honorary chairman; E. J. Condon, assistant to the president, Sears, Roebuck & Co., Chicago, Ill., president; vice-presidents, Louis Bromfield, author and farmer of Lucas, Ohio; Russell Firestone, assistant treasurer, Firestone Tire & Rubber Co., Akron, Ohio; and J. L. McCaffrey, vice-president, International Harvester Co., Chicago, Ill.; J. I. Clarke, vice-president, Bankers Trust Co., New York City, is treasurer; and Andrew S. Wing, secretary-manager.

THEODORE REED KENDALL
1890-1946

THE AMERICAN CITY records with deep regret the death, on February 4, of its former engineering editor, Theodore Reed Kendall.

Born in Boston in 1890, Mr. Kendall was graduated from Harvard College in 1912 and from Harvard Engineering School with the degree of Master of Civil Engineering in 1914. In 1917 he became engineering editor of this magazine and, in 1920, with Edgar J. Buttenheim, publisher, he started *Contractors and Engineers Monthly*, our associated publication. As editor Mr. Kendall spent virtually the whole of every construction season in the field studying active projects and maintaining close touch with highway and other public works officials and their problems. He continued his work with THE AMERICAN CITY as engineering editor and later as consulting editor until September 1943.

Mr. Kendall was a member of the American Society of Civil Engineers and very active in the Metropolitan (New York) Section, of which he was a director in 1927-28 and again in 1931-32 and vice-president in 1928-30. He was secretary of the Harvard Engineering Society for eight years and its president in 1929-30. At the time of his death he was a director of the American Road Builders' Association and a member of the American Society of Mechanical Engineers, The Boston Society of Civil Engineers, the Society of American Military Engineers, American Water Works Association, New England Water Works Association and the American Public Works Association.

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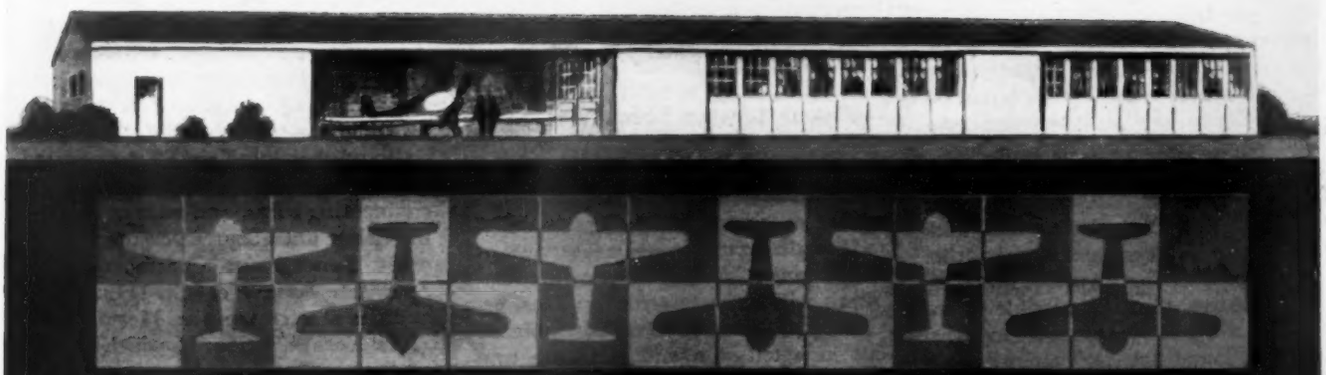

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Our Municipal Notebook II

Municipal Bond Market Outlook

THE MOST encouraging aspect of the municipal situation, reports Halsey, Stuart & Co., Inc., New York 5, N. Y., is the strengthened financial position of most local governments and the resulting opportunity for reasserting their traditional importance as autonomous governmental bodies. Action of the United States Supreme Court at the beginning of the year disposing of the repeated efforts of the Treasury Department to subject state and municipal bond interest to federal taxation (See THE AMERICAN CITY, February 1946, page 82), also seemingly removes that serious threat to the sovereignty of local governments so that with wisdom and restraint in the period ahead there is opportunity for local government to regain the independent position enjoyed at an earlier date, in the opinion of this firm

By wisdom and restraint, the firm's year-end survey states, is meant discrimination in accepting federal aid in projects essentially local in character and usefulness, abstinence from involvement in proprietary projects more naturally lying in the field of private enterprise, control of expenses in the period ahead when costs are likely to be advancing and when demand for improvements may be often more general than wise. Also desirable for the future soundness of state and local governments is an overall survey of the sources of tax revenues.

(See also page 119 of this issue)

Surplus Properties for Cities

IT IS now possible for city, county, and state public health agencies such as Health and Sanitation Departments, Water Works, Sewage, and Garbage Disposal plants to purchase surplus property at 40% discount. This information was made available by the United States Public Health Service, Robert C. Ayers, director, War Property Distribution, Federal Security Agency. This 40% discount from "fair value" will be granted eligible public health claimants under regulation 14 issued by the former Surplus Property Administration. "Fair value" is defined as the lowest priced prevailing at any trade level at the time of transaction.

To qualify for a price discount the applicant must be either an instrumentality of a state or local government or tax-exempt under section 101 (6) of the internal revenue code and organized primarily for promotion of public health.

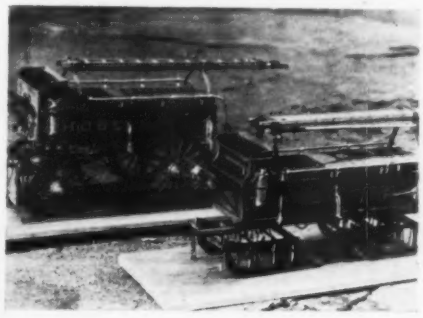
The following list shows regional offices of the War Assets Corporation which supply lists of available capital and producers' goods.

Ford Building, Atlanta, Ga.
Jamison Bldg., 2105 3rd Ave. N., Birmingham 3, Ala.
Sheraton Bldg., 10 Post Office Square, Boston 9, Mass.
317 Tryon Street, Charlotte 2, N. C.
208 South LaSalle Street, Chicago 4, Ill.
Newman-Stern Bldg., Cleveland, Ohio
301 Cotton Exchange Building, Dallas 1, Texas
Boston Building, Denver 2, Colo.
Buhl Bldg., Detroit, Mich.
Power Block, P. O. Box 177, Helena, Mont.
Rusk Bldg., 723 Main Street, Houston 2, Tex.
Western Union Bldg., Laura & Duval Streets, Jacksonville 2, Fla.
Dierks Bldg., 1006 Grand Ave., Kansas City 6, Mo.
Wallace Bldg., Markham & Maine Streets, Little Rock, Ark.
Pacific Mutual Bldg., 523 W. 6th, Los Angeles 14, Calif.
Lincoln Bank Bldg., 421 W. Market Street, Louisville 2, Ky.
McKnight Bldg., 2nd Ave. So. & 5th Streets, Minneapolis 1, Minn.
7020 Franklin Ave., New Orleans, La.
Consolidated-Vultee Plant, Nashville 3, Tenn.
70 Pine Street, New York 5, N. Y.
Cotton Exchange Bldg., Oklahoma City 2, Okla.
Woodmen of the World Bldg., Omaha 2, Neb.
1528 Walnut Street, Philadelphia 2, Pa.
310 S.W. 6th, Portland, Ore.
Richmond Trust Bldg., 7th and Main Streets, Richmond 19, Va.
505 N. 7th St., St., Louis, Mo.
101 W. 2nd St., Salt Lake City, Utah
Transit Tower Bldg., S. Saint Mary Street at Billita Street, San Antonio 5, Texas
Barneson Bldg., 256 Montgomery Street, San Francisco, Calif.
Central Building, Seattle 4, Wash.
Welch Bldg., 610 W. Maine Ave., Spokane

Scale Models of Horse-Drawn Apparatus

TWENTY-FIVE years ago Lieutenant Lawrence N. Clark of the Newton, Mass., Fire Department started collecting pictures of horse-drawn apparatus and now has about 700 of them. Whenever he saw the originals, he took their measurements. Later he began making small (1/8th size) models and he now has eighteen. Several of them are shown below.

In the collection are a one-horse hose reel, a one-horse hose wagon, six two-horse hose wagons, a two-horse chemical engine, three horse ladder trucks, one Amoskeag steam pumping engine, one Bolton Quickstep, one hand-drawn ladder truck, one small hand-pump engine, and a two-horse hose pung for use in snow.



Lieutenant Clark with his New York hose wagon model, and above, hose wagon and a hose "pung" for snow travel

School for Arson Detection

THE second annual specialized training course in arson investigation and detection will be held at Purdue University, April 8, 9, and 10, under the direction of the Indiana Fire Service Training Schools and the Public Safety Institute of Purdue, with the cooperation of local, state, and national organizations interested in arson problems. Specialists in arson investigation and detection from the United States and Canada have been invited to participate in the program. They will be supplemented by authorities and instructors in the fire and police service.

Administrative Control Records

GOVERNMENT Narrator" is a magazine issued from time to time by the Systems Division of Remington Rand, Inc., New York 10, N. Y. Twenty such issues appeared between 1937 and 1943 and recently the twenty-first was distributed to municipal and state government officials interested in administrative control records which will help increase the operating efficiency of public departments. Copies of many of the past issues are still available and may be obtained without cost from the company.

Another step forward in elevated water tank design

This welded, spheroidal-shaped Horton elevated water storage tank has just been erected in the Anacostia section of Washington, D. C. Modern in design, this structure incorporates several interesting engineering features. The tank itself is 106 ft. in diam. and is supported on sixteen 4-ft. diam. outer columns and one 40-ft. diam. fluted central column. There is a separate riser 5-ft. in diam. inside the fluted shell. The tank is 49 ft. to bottom and has a range in head of 34 ft. 6 in.

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Chicago 4.....2127 McCormick Building
San Francisco 5..1233-22 Battery St. Building
Philadelphia 3.1616-1700 Walnut St. Building
Atlanta 3.....2114 Healey Building
Washington 4 .....703 Atlantic Building
Detroit 26 .....1501 Lafayette Building

Plants in BIRMINGHAM, CHICAGO and GREENVILLE, PENNSYLVANIA

Water Supply and Treatment

New AWWA Officers

New officers who take the helm in the American Water Works Association for 1946 include:

President: Wendell R. LaDue, Chief Engineer and Superintendent, Bureau of Water & Sewerage, Akron, Ohio.

Vice-President: N. T. Veatch, Consulting Engineer, Kansas City, Mo.

Treasurer: William W. Brush, Editor, *Water Works Engineering*, New York, N. Y.

Cement Pipe Lining Makes High Carrying Capacities Permanent

THERE are two advantages in using cast iron pipe with a cement lining in your water system. First, you get a pipe that has an improved carrying capacity to start with and which maintains this carrying capacity as it gets older. Next, by use of this type of pipe lining, you can eliminate many taste, odor, and red-water difficulties. Thomas F. Wolfe called attention to these factors in a paper delivered before the North Carolina Section meeting of AWWA held recently in Charlotte, N. C.

The financial advantage of cement-lined cast iron pipe is real and measurable, Mr. Wolfe pointed out. Twenty-five year service records of this type of pipe carrying tuberculating water demonstrate that the pipe has a high continued flow coefficient, he stated. Comparative tests with hot coal tar dip pipe 36 inches in diameter showed that the latter had a Williams and Hazen coefficient of 136 in comparison with 145 for cement-lined pipe of similar diameter laid at Corpus Christi, Texas.

Carrying these comparisons further, Mr. Wolfe quoted tests showing that a 20-inch tar-coated line in service for 29 years had a Williams and Hazen coefficient of 130 when new which dropped very close to 100. Using this as a basis for calculations for a 36-inch pipeline carrying 8.29 mgd and measuring 74,400 feet in length, he showed that the cement lining would make possible a $48,300 saving during a 30-year period of service.

Assuming that demand on this line would increase from 8.29 to 16 mgd as could easily be the case, and by capitalizing the savings at 4 percent, Mr. Wolfe showed a total saving in pumping costs of $210,875. The actual cost of the lining at the present market price, he stated, would be in the neighborhood of $40,000.

Under certain conditions the higher carrying capacity of the cement-lined pipe makes it possible to use a smaller diameter than would normally be required if tar-dipped pipe were used. Cement-lined pipe for the distribution systems also presents advantages that should be realized, Mr. Wolfe emphasized. The added carrying capacity, he stated, makes possible better pressures at the distribution points, and greater amounts of water for fire protection. The cost of cement lining which insures carrying capacity for the life of the pipe is much less than the cost of replacement, even though that replacement might be delayed for as much as 45 years.

"The long physical life of cast iron pipe," Mr. Wolfe stated in conclusion, "means nothing if its carrying capacity becomes impaired. The logical way to prevent this impairment is by the use of cement linings."

How to Find Cracks in Cast Iron Pipe

THE American Cast Iron Pipe Company's research and testing laboratories have developed a new method of finding hairline cracks in cast iron pipe by utilizing the penetrating properties of turpentine and its wetting power on dry portland cement. This method was reported in the Fourth Quarter edition of *Pipe Progress*. Here is the procedure:

Fine cracks show up plainly when the interior of the pipe has been powdered over with portland cement

First, clean and dry the surface to be inspected; then apply a thin coat of turpentine using either a brush or spray; wipe off the excess and immediately dust on a thin film of portland cement. The cement will disclose the presence of any crack by a wet streak directly above it. The dry cement can be dusted into the pipe by a number of methods such as an old-fashioned salt shaker, a burlap bag, or a cloth sack. Its inspection can be performed at the trench without delaying the pipe laying program. It can also be done at the point of unloading, if desired.

The existence of a crack in the pipe can be determined by suspending the pipe in the air and striking it with a hammer. If the sound produced rings clearly like a bell the pipe my be judged to be free of cracks. If the sound is not clear the inspector can then apply the turpentine and cement to locate the flaw if a visual examination does not disclose it.

Make Water Rates Attractive to the Larger User

WATER rates are generally too high to attract the large user and any appraisal of the water service should attempt to uncover ways of reducing them if the water department is to be an important factor in the economic advance of the city. This was pointed out by Charles H. Capen, Jr., Chief Engineer of the North Jersey District Water Supply Commission in a paper delivered before the Four States Section of the AWWA recently in Baltimore.

To make rates attractive, a water department should do the following, Mr. Capen believes:

1. Review and analyze operating costs with the idea in mind of making rates lower to large industries.
2. Construct facilities that will provide for better service to large users.
3. Take advantage of low interest rates when planning and executing construction programs.

Water utilities suffered after the last war, Mr. Capen pointed out, because of reduced consumption and the reduced revenue which resulted. Rates were insufficient to meet large mandatory charges in bond retirement and interest, particularly in the early '30s and reserve funds had not been accumulated because of the fear of raids on these funds from other municipal functions.

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Refuse Collection and Disposal

Wauwatosa, Wis., city forces designed and built this cart to simplify the job of carting rubbish to the curb for pickup. The cart can be used on lawns, rough driveways, and snow, if not too deep

Two-Wheeled Ash Carts Save Time and Energy

TWO MEN WITH a cart can handle the same amount of rubbish as three men carrying it, according to M. F. Linnan, City Engineer of Wauwatosa, Wis. Wauwatosa does not have alleys and it used to take several trips from the back door to the curb with the old method but with the Wauwatosa design of cart all of it is brought to the curb in one trip.

Last summer the first experimental cart was tried. It had four wheels four inches in diameter; two of them were casters. It was tried by one crew for several days and pronounced a failure by the men. Mr. Linnan than gave it to another crew, but, after going back to carrying, the first crew asked for the cart again. However, the four-wheel design was not entirely satisfactory. The small wheels did not roll easily over cracks and bumps in the driveways and would sink into the lawn. Also the cart tipped rather easily.

A two-wheel cart, using rubber-tired wheels from wheelbarrows was designed and built. This eliminated the tipping and the other objections of the four-wheel type. The load is balanced on the axle so that no lifting is required while pushing. The larger wheels can be used on lawns, rough driveways, and on snow if not too deep.

Carts weigh about fifty pounds and can be thrown on top of the truck when going to and from the job. When the idea of carts was first suggested, the city tried to buy some but nothing satisfactory could be found. The Wauwatosa design was built by the city's mechanical department at an approximate cost of fifty dollars. While this seems relatively high, the carts pay for themselves in a short time.

Ashes are collected once a week during the heating season and householders can depend on the men being there at a certain time, unless emergency snow removal makes it impossible. Two men carry ashes from the basement and load it on the cart at the rear door. It is then taken to the curb in one trip where a dump truck picks it up. Other men following the truck take the empty containers to the rear door.

Garbage Cans Prohibited

THE suburban development of Crestview on the outskirts of Kansas City, Mo., is perhaps the first community in this country to prohibit garbage cans. Kitchen wastes are put through electric food waste grinders and discharged into the sewerage system.

Trials of "Liberated" Collection System

THEY are still struggling with the street cleaning and refuse problem in Paris, France, and it has been a man-sized job, according to a story in the British publication, *Municipal Journal and Local Government Administrator*. During the four years of the occupation no refuse collection trucks were replaced, consequently their number fell from more than five hundred to just below thirty. These trucks were entirely automatic and therefore required considerable upkeep.

After the liberation, garbage and refuse collections took place every two days. However this caused much complaint because of the lack of adequate garbage cans. Many of the containers, filled for 48 hours without collection, often broke easily with the result that the refuse was difficult to gather and became a health menace. Today, with more trucks at its disposal, the refuse service has gone back to the more satisfactory daily collection system.

Street cleaning has been difficult also. Paris has had a unique system of street flushing from hydrants located in the gutters. The shortage of power, however, has reduced the use of these flushers. Before the war, the streets were flushed at least four times a day. During the occupation, the water cleaning had stopped altogether and authorities feared it might aggravate a difficult health problem, but now the water is turned on at least twice a day.

Dover's Definition of Garbage and Refuse

THERE seems to be more than one way to beat the problem of heavy garbage and refuse collection. One simple commendable system is to build incinerator capacity great enough to take care of the load. Another is to simply redefine garbage and refuse, making it more exclusive. Here are the definitions that Dover, Delaware, uses:

Garbage and combustible refuse shall mean all solid and semi-solid kitchen refuse subject to decay or putrefaction and all market waste of animal and vegetable matter which was intended to be used as food. It shall also include animal offal, carcasses of dead animals, waste animal matter from butcher stores and all combustible substances from public and private establishments and residences. For the purposes of this ordinance, sawdust, scrap lumber, paper, cardboard and cardboard cartons, and other combustible refuse shall be considered as garbage.

Rubbish shall include all wastes not subject to decay or putrefaction from all public and private establishments and residences. It shall include ashes, brush, tree and garden clippings, dirt sweepings, tin cans, glass articles, and all other combustible substances. Due to the large amount of water content, substances like watermelon, cantaloupe, tomato skins, corn husks, peach peelings, bean hulls, etc., cannot be burned at the incinerator and must be disposed of at the city dump as rubbish.

This probably constitutes the first time that a municipality has classified sawdust, scrap paper, lumber, and cardboard as garbage and at the same time has defined watermelon, canteloupe, tomato skins, corn husks, peach peelings, and similar items as incombustible rubbish.

GAITED

To Every Job Requirement

8 OVERLAPPING FORWARD SPEEDS give Adams Motor Graders exactly the right "gait" for every type of grading operation . . . for ditch and bank cutting—for blading and scarifying—for aggregate mixing and spreading . . . plus transport speeds up to 21 m.p.h. for fast moving from job to job.

Translated into end results, Adams' flexible range of speeds means *fastest practical operation on every job—more work per day—more profitable operation . . .*

What's more, in Adams Motor Graders you get a host of other features essential to efficient, long-life performance . . . rugged strength—rigidity—balanced weight distribution—fast, accurate blade controls—wide range of usefulness—minimum operating and maintenance costs.

Phone or visit your local Adams dealer. He will gladly show you why it's always good business to specify Adams Motor Graders.

J. D. ADAMS MANUFACTURING CO., *Indianapolis, Indiana*

ADAMS

ROAD BUILDING AND EARTH-MOVING EQUIPMENT

Street Construction and Maintenance

German Streets Show Good Construction

GERMAN streets survived the heavy wartime traffic in excellent shape This was the observation of Arthur V. Sheridan, Commissioner of Public Works, Bronx, N. Y., based on a recent trip through France and Germany.

Many German streets are of small granite blocks laid in concentric rings similar to a patented method used 30 years ago in the Bronx and later abandoned. However, these streets, except for direct bomb hits, were in excellent condition, far better than many New York streets, even with heavy army equipment constantly rolling over them.

Significant in the Autobahn design, Commissioner Sheridan noted, was the fact that the Germans mixed pleasure and commercial traffic on these expressways and experienced no difficulty. This is in contrast to New York practice that segregates bus and truck vehicles.

Highway bridge design in a few instances also looked interesting, Commisioner Sheridan reported, because of the extremely slender section that German engineers used in certain arch crowns. Some of these arches having spans of from 90 to 100 feet appeared to have a crown depth of not more than 14 to 16 inches.

How to Make Patches Stay Down

STREET maintenance workers of Danville, Va., whipped a mean problem this winter—how to make asphalt patches stay down.

Heavily traveled streets in Danville are constructed of macadam or brick with a sheet asphalt wearing surface. Heavy traffic coupled with an abnormally severe winter caused a number of breaks in the wearing surface which the maintenance crews have been patching with a pre-mixed patching material. Continued rain, snow, and sleet made it difficult to keep this patching material down more than a day or two.

However, Director of Public Works Wickre states that the Superintendent of Streets overcame this difficulty by heating the area to be patched with a torch attached to the distributor. This not only dried the area thoroughly but also softened the adjacent asphalt and made it possible to bond the patch in place much more solidly.

Stabilized Base Street Work for Memphis Suburbs

Shelby County (Tenn.) Commissioners are caring for the suburban street requirements of various portions of Memphis by using a stabilized gravel mixture for the main roadway between curb-and-gutter sections. The gravel is produced at the local penal farm and compacts readily into a dense, weatherproof surface

How Street Bids Match the Estimates

CONTRACTORS' bids on public works projects in 68 cities range from 10% below the cities' cost estimates to 235% above, the International City Managers' Association reports. A survey of bid prices on public works construction in 203 council-manager cities indicates that contractors' bids generally are exceeding the more recent cost estimates by 20 to 50%.

Six cities received street improvement bids equal to their cost estimates, one city 6% below cost, while 11 others received bid prices ranging from 5 to 50% higher than their estimates. Weserville, Ohio, obtained a bid on an asphaltic concrete overlay on a concrete base that was only 5% above the estimate. Long Beach, Calif., received a bid on street work that was 2.4% under estimates.

Two Rivers, Wis., rejected bids on soil cement pavement which were 40% higher than two-year estimates. Plans are to readvertise in the spring in the hope that the labor market will be more advantageous by that time. High Point, N. C., in awarding contracts on street improvements, found prices were generally 30% higher than estimated costs. Similarly, South Pasadena, Calif., awarded contracts despite bid prices exceeding by 25% the cost estimates prepared six months before.

Several cities report curb and gutter projects with bid prices ranging from 10% below to 50% above cost estimates. The extreme case is Royal Oak, Mich., which received only one bid for curb replacement, and that 50% higher than a one-month old cost estimate.

All but a few of the bids on building construction were substantially higher than cost estimates. Building prices perhaps show the greatest deviation from estimated costs. Yet cities went ahead and awarded contracts for much-needed fire stations and garages despite costs of 25% more than originally planned.

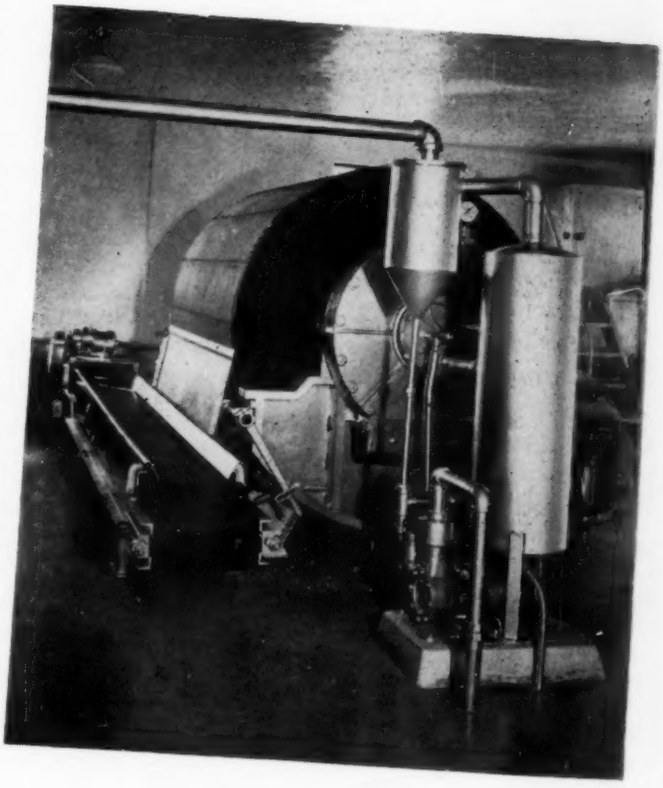
California Cities Get More Gas Tax Money

THE QUARTER of a cent per gallon portion of gas tax allotted to cities will mean an increase of 59% revenue for California municipalities' street construction, according to a statement by the California Taxpayers' Association. In the past, this tax has furnished the cities with an annual revenue ranging between $2,740,000 and $4,430,000. The Association estimates that this will go to $4,801,000 in 1946, and will rise to $7,446,000 by 1955.

Who'd Guess?

Yes! Who'd guess that this comfortable looking dwelling houses the city's sewage treatment plant? — Yet a number of Municipalities have installed sewage treatment equipment and accessories in equally attractive buildings. Compact EIMCO Sewage Filters and accessories make this type of housing possible—plants are located close in and their operations are free from odors. The use of Eimco vacuum filters avoids the installation of sludge drying beds that occupy thousands of square feet of space out in the open and necessitates locating sewage treatment plants considerable distances from the city. In addition, Eimco's sewage treatment equipment offers lower initial, operating and maintenance costs and assures a type of building and construction that does not spoil the natural beauty of the surrounding community.

Write for more information on Eimco's Sewage Treatment Equipment.



Typical installation of EIMCO Continuous Vacuum Filter in Sewage Treatment Plant. Room here is 24' x 24' with 9' ceiling. The large room provides plenty of space for auxiliary operating equipment.

EIMCO

THE EIMCO CORPORATION

Executive Offices and Factories: Salt Lake City 8, Utah
Branches: New York, Chicago, El Paso, Sacramento, St. Louis

A-108

Sewerage and Sewage Treatment

Whose Responsibility Is Sewage Treatment?

SHOULD federal grants to sewage treatment plants be considered as gifts to impoverished communities or a fair method of helping to apportion the costs among those who actually receive the benefits?

Unfortunately, in our opinion, too many people have been swayed by the former type of thinking. They refuse to look at these grants as anything but an economic crutch that supposedly will help us prevent or limp through another depression. This is notwithstanding long and established use of federal grants in such fields as highways, where they represent only the government's recognition of its obligation to highway construction.

Sewage treatment is unique in that it is the only municipal function that is performed more for the benefit of others than for the municipality itself. In comparatively few instances does the community that treats the sewage benefit thereby. Almost invariably we see sewage treatment plants born amid the unhealthy background of injunctions and court orders; we see them operated under the critical eye of various health departments and always with that continued threat of legal action if the treatment process falters.

We propound no new theory when we call attention to the fact that sewerage and sanitation are more than just municipal problems, but are actually the direct concern of the entire nation.

Water supply, a service performed strictly for the community, cannot similarly justify an outside grant, since those who get the direct service pay the bill. Likewise fire and police protection might be acknowledged as a service to the community directly. The sewers themselves, the collection system, also serve directly. Street construction and maintenance can be placed in the same category, except that certain states do recognize their obligation to their cities by giving them a share of the gas tax for street construction, since cars that use the gasoline drive on city streets as well as on state highways.

However, as pointed out above, sewage treatment plants perform a different function. Built usually to improve the sanitation, not of the community itself, but of the multitude of communities down-stream, it often becomes an unwanted, ignored relative in the family of municipal activities.

One should not consider a grant to a community for sewage treatment as a "handout." Actually it is a recognition of the obligation that the nation as a whole owes to this municipal function.

Why a Planning Slowdown in the Sanitation Field?

THE TIME may be a little late to comment on the action of the Committee on Water and Sewage Works Development recommending a slowdown in public works planning in a release made January 22, 1946. Nevertheless let us put on the record that in our opinion this action is an unfortunate anti-climax to otherwise progressive and commendable work by a set of top-flight engineers.

The Committee's analysis of the situation is intriguing. It recognizes, as everyone else does, that present prices are high, that both labor and materials are uncertain. It also feels modestly proud of the planning work that it has encouraged to date. Then in the next breath it reverses the field with this profound statement:

"In the face of such condition (high prices, uncertain materials, and labor market) the Committee agrees that it is not judicious to continue the promotion of water and sewage works planning that has not already started."

Now if Doakesville six months ago recognized its need for water and sewerage improvements and drew up plans and specifications to meet this need, and if Podunk Center with a similar population has a similar need for improvements but hasn't done any planning, it certainly doesn't look sensible to us for the Committee to sagely decide that Doakesville was wise in preparing its plans but Podunk Center shouldn't follow suit.

Plans for the sanitation field should always be good for at least ten years—if they aren't, the community retained the wrong engineer. Plans are about the only thing that can be prepared today in some semblance of normality.

A well-conceived plan for a sanitation improvement that your community needs is still a mighty good investment, and you can draw those plans and prepare those specifications today without any fear of upsetting the national economy.

Corpus Christi's Sewage Treatment Plant

This sewage treatment plant in Corpus Christi, Texas, is Dorr equipped. Treatment consist of grit removal, flocculation, sedimentation, trickling filtration, and final sedimentation

PROVED... *and IMPROVED*

For Over 65 Years...!

HIGHEST EFFICIENCY

Layne Vertical Turbine Pumps are now available in sizes to produce from 40 to 16,000 gallons of water per minute. Their high efficiency saves hundreds of dollars on power cost per year.

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AFFILIATED COMPANIES

Layne-Arkansas Co., Stuttgart, Ark. ✱ Layne-Atlantic Co., Norfolk, Va. ✱ Layne-Central Co., Memphis, Tenn. ✱ Layne-Northern Co., Mishawaka, Ind. ✱ Layne-Louisiana Co., Lake Charles, La. ✱ Louisiana Well Co., Monroe, La. ✱ Layne-New York Co., New York City and Pittsburgh, Pa. ✱ Layne-Northwest Co., Milwaukee, Wis. ✱ Layne-Ohio Co., Columbus, Ohio ✱ Layne-Texas Co., Houston and Dallas, Texas ✱ Layne-Western Co., Kansas City, Mo., Chicago, Ill., and Omaha, Neb. ✱ Layne-Western Co., of Minnesota, Minneapolis, Minn. ✱ International Water Supply, Ltd., London, Ontario, Canada ✱ Layne-Hispano Americana, S. A., Mexico, D. F.

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Layne's amazingly solid leadership in the Well Water System field is recognized the world over. As pioneers in their chosen field, they have perfected more improvements in quality and efficiency than all competitive firms combined. This has been proven time and time again. Those improvements have so distinguished Layne Well Water Systems and Layne Vertical Turbine Pumps that they are known and accepted as the standard of comparison wherever modern water producing equipment is used.

Thousands of industries, cities, mines and irrigation projects, both big and little, not only prefer but demand that their wells and pumps be built and installed by Layne. They know that Layne Well Water Systems are exceptionally fine in quality, outstanding in efficiency and always last longer.

Layne provides valuable advisory service on all kinds of well water production problems and gladly extends this cooperation without obligation. For late literature, address Layne & Bowler, Inc., General Offices, Memphis 8, Tenn.

LAYNE

WELL WATER SYSTEMS
VERTICAL TURBINE PUMPS

Public Safety

Fire Fighting Tools

VITALLY important as pumping engines, aerial ladder trucks, hose wagons, squad cars and the other heavy artillery of fire fighting are, nearly every fire department pays close attention to the many hand accessories and the development of new devices. How often these smaller tools are called for is illustrated by the accompanying excerpt from the report of Chief James J. Higgins of Schenectady, N. Y. It shows how many times certain items of equipment were used during the month of December 1945 and for the whole year. That water is king of extinguishment is indicated by the fact that Indian fire pumps and pails of water were used 85 times compared with 15 times for fire extinguishers.

EQUIPMENT USED	This Month	This Year To Date
Booster Tanks	23	341
Chimney Cleaners—Sambo	9	25
Covers Spread	7	62
Extinguishers—Foamite		
Extinguishers—Soda & Acid		15
Extinguishers—Other Types		
Flood Lights	2	22
Gas Mask—Diving Suits		13
Garden Hose, No. Times		15
Hose, No. Feet of Booster	4,050	60,150
2½ Inch	450	25,200
3 Inch	400	14,450
Indian Pumps and Pails of Water, No. of Times Used	1	85
Ladders—No. of Feet	160	2,166
Private Appliances	1	4
Shovels & Brooms, Times Used	5	99
Sand and Other Material		
Not of Department		
Spray Nozzles	2	81
Tar Paper—Roof Covering		
Turret & Multiple Nozzles		4
Water Lines—Hydrant	2	84
Water Lines—Engine		8
Miscellaneous Equipment	3	19

Schenectady's fire losses in 1945 were lowest in 25 years, the *Schenectady Gazette* stated editorially on January 23, 1946. In his report to Acting City Manager Arlen T. St. Louis, Chief Higgins attributed the low loss figure of $78,945 compared with $185,706 in 1944 to the emphasis given fire prevention campaigns.

Airport Fire Prevention Study Planned

THE COMMITTEE on Fire Prevention and Engineering Standards of the National Board of Fire Underwriters has voted to proceed with the intensive study of airport fire prevention and safety to life in aviation at the request of a Conference on Airport Protection. The conference is made up of representatives of the airlines, the Civil Aeronautics Administration, the aviation insurance groups, and other insurance service organizations.

The recent expansion and expected rapid development in the field of civilian flying, together with the tremendous increase in scope of commercial aviation and facilities, calls for a thorough review of the existing standards for construction of hangars and airport fire protection.

The most important phases of the program deal with the construction and protection of hangars and other fixed airport installations, crash fire fighting and rescue work, and the provision for fire detection and extinguishing systems on aircraft.

Temporary Bleachers Collapse

THE TEMPORARY grandstand erected for a Cleveland football game in November collapsed under the weight of the fans' enthusiasm when the supports gave way on the wet slippery ground. No one was seriously hurt, although seven persons were taken to the hospital. The circles in the picture show police removing the injured.

The American Standard Building Code *Requirements of Potable Steel and Wood Grandstands* offers suggestions for requirements that would help prevent such accidents. A second standard, to offer protection against hazards in tents, grandstands, and other places of outdoor assembly, is now nearing completion. This new standard provides supplementary requirements to protect audiences attending circuses, carnivals, sports events, and other outdoor meetings.

Parking Meters Helpful in Greenville, Texas

METERS were installed in Greenville, Texas, population 14,000, in time for enforcement to begin on December 5, 1945. They were installed to provide turnover in parking space, thus eliminating parkers who remained in one place all day, every day, such as clerks who worked and left car parked on street all day. Our 375 Karpark meters take pennies and nickels, 12 minutes for a penny and 5 cents for one hour. About 50 of these will be exchanged for 2-hour meters.

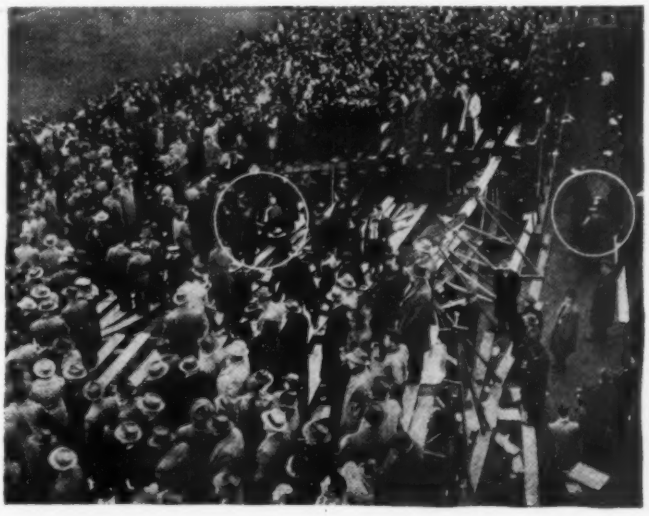
Of the money taken in by meters, 75 percent is paid each month to the manufacturer until they are paid for. Then, after deducting all expense of operation, which includes salary of two men who repair, collect coins, and check meters, the residue goes into the police department budget. Meters are a success, say the public and the city.

VERGIL MILLER, Chief of Police
Greenville, Texas

Motorcycles Day and Night

EAST ORANGE, N. J., owns four Harley-Davidson police motorcycles and two ride by day and two by night. Two of the machines are pre-war and two are wartime replacements. In October these four motorcycle offices caught 209 speeders (no tickets are killed), stopped five for careless driving, 14 for driving with one headlight, and four for driving through a red light. Except during wet weather, they drive straight through winter with windshields. Their records are presented each month to the Board of Police Commissioners.

CHRISTIAN N. DELL, Chief of Police
East Orange, N. J.

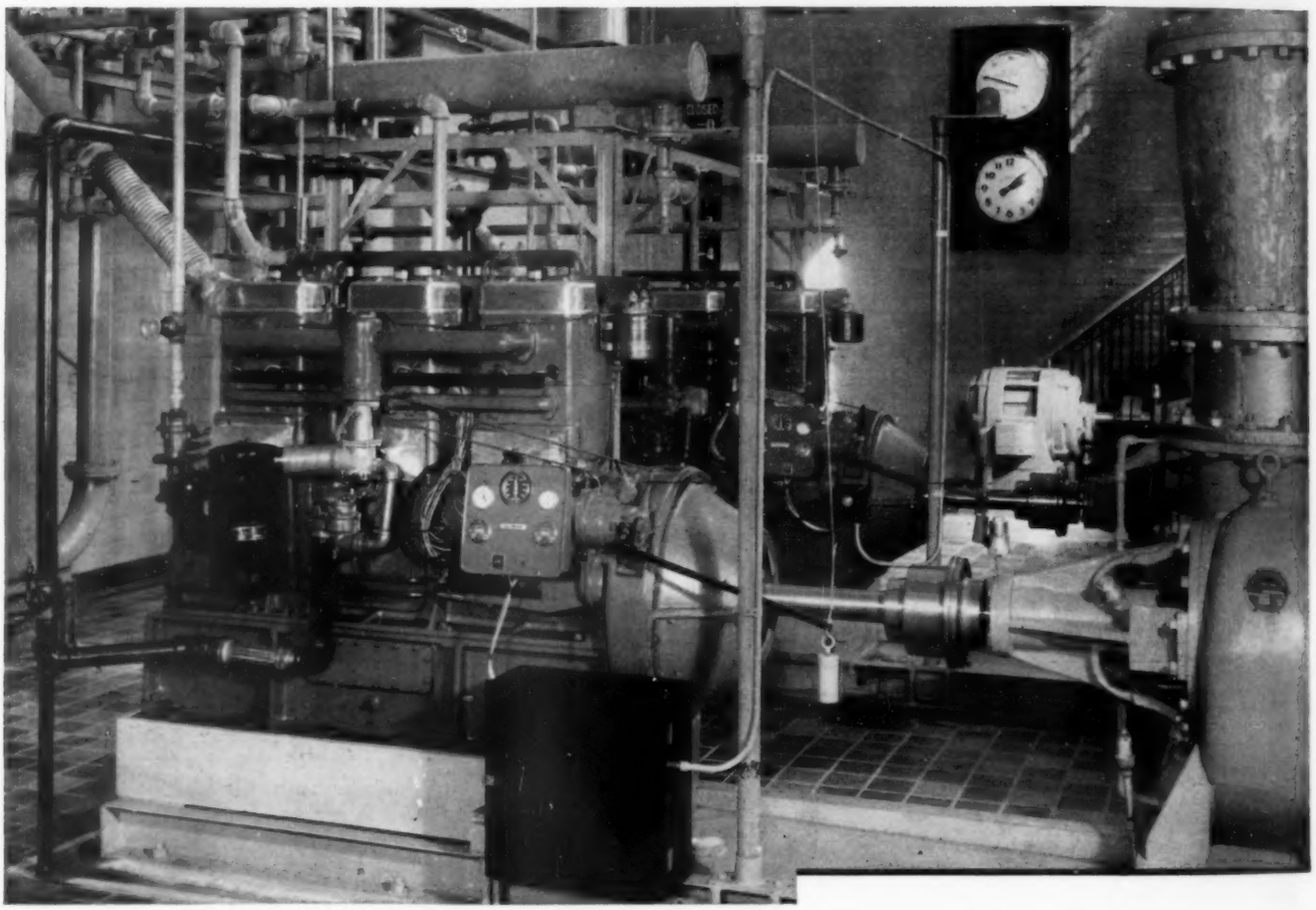


Hot enthusiasm and wet ground brought down this temporary grandstand in Cleveland. (Injured persons being carried out are shown in the circles; there were seven casualties; none serious.) Adherence to American Standard Building Code requirements could have prevented this accident

CHEAP POWER

¼¢ PER KILOWATT HOUR

with Climax Engines utilizing COSTLESS FUEL*



Two 75 H.P. Climax Sewage Gas Engines Direct Connected to Sewage Pumps, Kenosha, Wisconsin.

* Climax Engines, operating smoothly and efficiently on sewage gas, generate power for the equivalent of ¼ cent or less per kilowatt hour. For a plant serving a population of 20,000 or more, this ¼ cent cost rate would include *all costs* —maintenance, lubricating oil, interest on investment and depreciation. In addition to this saving, 50% heat recovery from jacket water and exhaust may be used to heat digester tanks and buildings.

Consider Climax Engines before approving a new installation. There are 4, 6, 8, and 12 cylinder, 4-cycle types that operate economically on gasoline, butane, sewage or natural gas. For complete information and specification bulletins, write Climax Engineering Company, Clinton, Iowa.

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BLUE STREAK ENGINE
Builder of Climax DIESELS and GENERATING SETS
CLIMAX ENGINEERING COMPANY

Stop--Check and Mail

Please check over the list of interesting catalogs below obtainable free of charge and either write direct to the manufacturers for their literature, or, if you prefer, put a circle around the identifying numbers below to indicate the catalogs you want, mail this coupon to The American City Magazine, 470 Fourth Ave., New York 16, and we will see that catalogs are sent to you without expense or obligation on your part. 3/46

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Name _____ Position _____

Address _____

Industrial Trucks

593. The fact that every city has heavy things to be moved around such as supplies, spare parts, files, and the like, makes it worth while to find out about the efficient industrial trucks called "transporters." Capacities are 4,000 pounds for the lift-type truck and 4,000 or 6,000 pounds for the platform trucks. Literature will be sent by Automatic Transportation Co. (Division of Yale and Towne Mfg. Co.), 147 West 87th St., Dept. C, Chicago 20, Ill.

Guide for Modern Gardening

594. Municipal park officials will want a copy of Cole's 1946 Guide to Modern Gardening before they start work on their park improvements this Spring. Write The Cole Nursery Co., Painesville, Ohio, for a copy of this bulletin.

Corrosion-Resistant Cements

595. Bulletin 810 issued by The U. S. Stoneware Co., Akron 9, Ohio, discusses the eight different corrosion-resistant cements it manufactures—each with individual characteristics designed to meet specific requirements.

Two-Stage Centrifugal Pumps

596. American Marsh's Type HHM pump is designed for boiler feed service and to handle hot water as high as 300°F at speeds of 2200 to 3600 rpm. This is a ball-bearing, horizontally-split case, two stage, single suction, centrifugal pump that is suited also for steam turbine drive because of its high speed characteristics. More complete details are available in Bulletin 381 from the American-March Pumps, Inc., Battle Creek, Mich.

Road Mix Equipment

597. Street construction and airport officials will be interested in information on the Seaman Pulvi-Mixer for place mixing of stabilizing materials which is said to reduce road mix time over 60% permitting more rapid finishing at a lower cost. A booklet "Soil Stabilization Methods" is available containing practical up-to-date information about soil stabilization engineering practices and information about the use of the Seaman mixer in its wide variety of applications. Write Seaman Motors, Milwaukee 3, Wis., for Bulletin AC-24.

Primers and Air Release Valves

598. Valuable literature is available from Valve and Primer Corp., Room 366-111 W. Washington St., Chicago 2, Ill., on its automatic, power, or tank primers. Data is also available on air release valves for filter pipe lines, and distribution lines.

Hydraulic Tower Lifts

599. Officials in charge of street light and signal maintenance, tree trimming, or heavy line work will be interested in a descriptive folder from the Bird-White Co., Dept. AC, 3119 W. Lake St., Chicago 12, Ill., on its hydraulic tower lifts for this overhead work. Towers can be installed on present streamlined trucks as well as open back utility and general maintenance trucks.

Fire Fighting Equipment

600. Municipalities interested in adding to fire fighting equipment or making replacements should secure literature from the Mack Mfg. Corp., Fire Engine Dept., Empire State Bldg., New York 1, N. Y., on the engineering of its equipment and the results other cities are getting.

How to Reflectorize Street Signs

601. Here is a machine with which you can reflectorize embossed signs. Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn., will send you complete information on this equipment that employs atmospheric pressure to mold the reflectorizing material to every plane of the sign surface. It may also be used on flat signs and in reflectorizing reconditioned embossed signs.

Train Administrators by Correspondence Courses

602. The training of city administrators for your city can be accomplished through correspondence courses. The International City Managers' Association, 1313 E. 60th St., Chicago 37, Ill., will send you a special circular on its eight correspondence courses in municipal administration giving details on the texts and lessons included.

How to Clean Sewer Pipe

603. No matter what your pipe cleaning problem, illustrated literature from the Flexible Sewer Rod Equipment Co., 9059 Venice Blvd., Los Angeles 34, Calif., will show you how you can effect savings in money, time, and personnel, and avoid dig-ups. A few men equipped with an auger and flexible rod powered by a motor can do an effective job for you.

Refuse Disposal Truck Body

604. Are you interested in speeding up, simplifying, and improving municipal garbage collection and disposal? The Heil Co., Milwaukee 1, Wis., will send you bulletins on the new Heil Colecto-Pak refuse disposal body which point out low loading height, double capacity, complete enclosure, and easy maintenance.

Vacuum Sewage Filters

605. Sewage treatment officials will be interested in literature from the Eimco Corp., Salt Lake City 8, Utah, on its continuous vacuum filters and accessories. The company points out that the use of these filters avoids installation of sludge drying beds and that the plants are free from odors.

Earth Drills

606. Officials in charge of light, water, sewer, park, and street departments will be interested in information from Ka-Mo Tools, Inc., 5525 West Ohio St., Chicago 44, Ill., on its earth drills. These are used for drilling holes in earth, muck, sand, or clay for setting posts, fences, planting shrubs, and trees. Also it is used for testing water or gas leaks under streets, making it unnecessary to cut large openings before the leak is discovered.

To Clean Catch Basins

607. For information about an orange peel bucket that will operate inside a 12-inch pipe and is efficient in cleaning sewer catch basins, write for bulletin 658 to The Hayward Co., 34-38 Dey St., New York 7, N. Y.

Save Space by Microfilming

608. If your public records are occupying too much space or you have a microfilming problem, find out about the Fassel camera that photographs both sides of a document simultaneously. Address Dept. M, York Microstat Corp., 18 West 48th St., New York, N. Y.

Leak Detectors and Pipeline Equipment

609. Water works superintendents who want facts on the Fisher M-Scope buried pipe and cable finders and water leak detectors, can get them from the Joseph G. Pollard Co., Inc., 141 Ashland Pl., Brooklyn 1, N. Y., east coast distributor for these products of the Fisher Research Laboratory, Palo Alto, Calif.

Municipal Accounting Machine

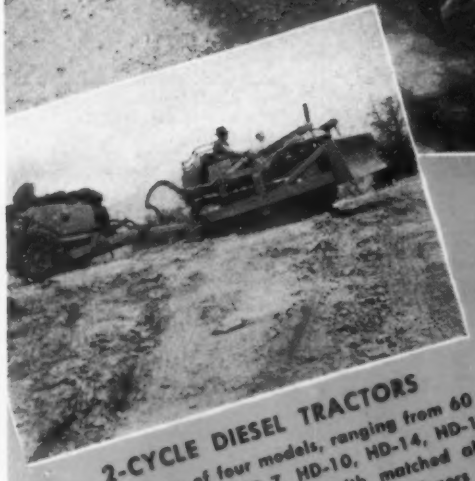
610. Perhaps you have been looking for some such machine as the Sundstrand municipal accounting machine. Underwood Corp., One Park Ave., New York 16, N. Y., will send you details on this machine which prepares tax roll and tax bill and posts to taxpayer's ledger card in one operation. The machine also posts receipts against unpaid balance for the year as well as against total outstanding balance for all years. It will give a trial balance of delinquent accounts individually by years, and in totals.

(Continued on page 21)

a NEW DAY for Construction

. . . IN THE ALLIS-CHALMERS 1946 LINE-UP OF EQUIPMENT*

MODEL A-D MOTOR GRADER
— 75 Diesel h.p. engine . . . more traction, more clearance . . . a full range of blade positions for handling complete grading of streets, mixing blacktop.



2-CYCLE DIESEL TRACTORS
— Now a choice of four models, ranging from 60 to 132 drawbar h.p. — HD-7, HD-10, HD-14, HD-14C (Torque Converter Tractor) — with matched allied equipment — cable and hydraulic bulldozers and scrapers . . . snow plows, winches, sheepfoot rollers, rippers.

MODEL W-SPEED PATROL
— for light maintenance and construction . . . performs at fraction of usual grading cost — low original cost, low operating cost.

Up-to-the-Minute in design!
Modern in performance!
A new high in productivity . . .
a new ease in operation . . .
a new low in grading cost.

It's a New Day for construction men . . . with Allis-Chalmers power!

* MORE MACHINES ARE TO BE ADDED *Watch for Announcements!*

POWER UNITS
— for pumping water, powering crushers, compressors, mixers, welders and other equipment. Available with various accessories to fit the application. Five sizes. Choice of fuels.

MODEL I-B WHEEL TRACTOR
— the ideal, economical unit for countless pulling and pushing jobs — especially popular for sweeping streets, blacktop, snow.

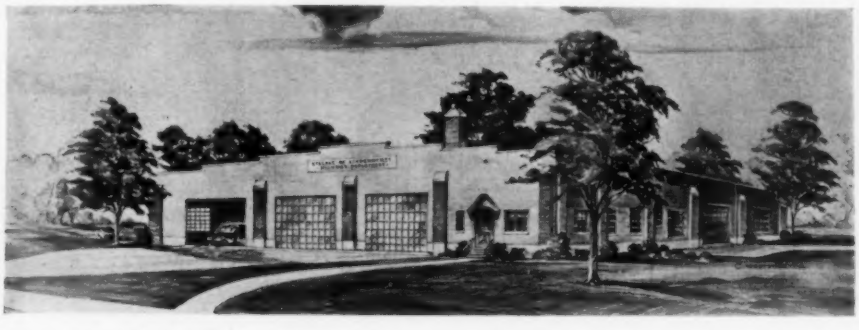
ALLIS-CHALMERS

TRACTOR DIVISION • MILWAUKEE 1, U. S. A.

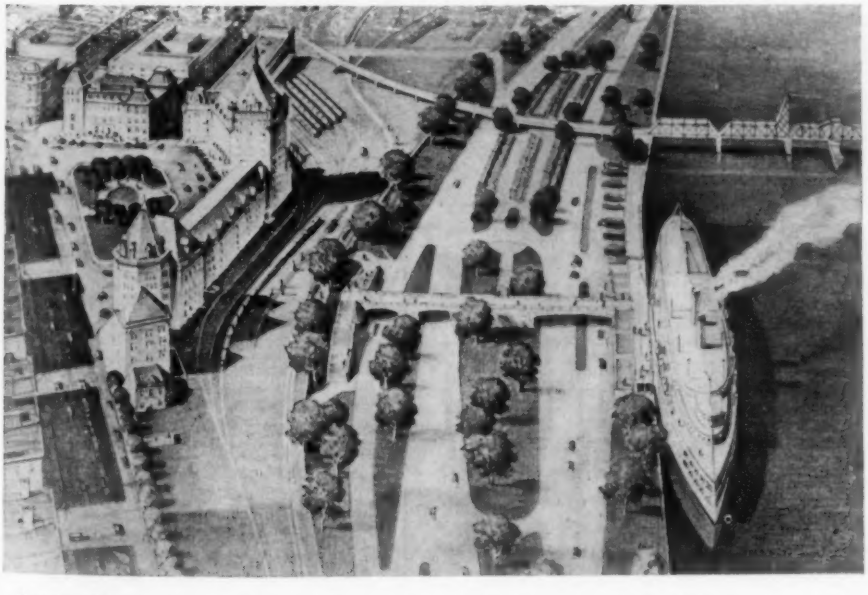
Vol. LXI, No. 3 The American City March 1946

New York State Makes Local Planning Work

Scarsdale is anxious to have this proposed $114,590 library become a reality soon, giving it number two position on its list of post-war projects. The new library would replace the present antiquated structure, which is heavily patronized by both adults and children. It is designed with a view to meeting the needs of anticipated population increases in the post-war period. Alfred M. Githens is the architect



Storage and maintenance facilities would become available to the Lindenhurst Village Highway Department with the erection of this one-story steel and concrete building at an estimated cost of $47,000. H. G. Wichman of Lindenhurst is the architect



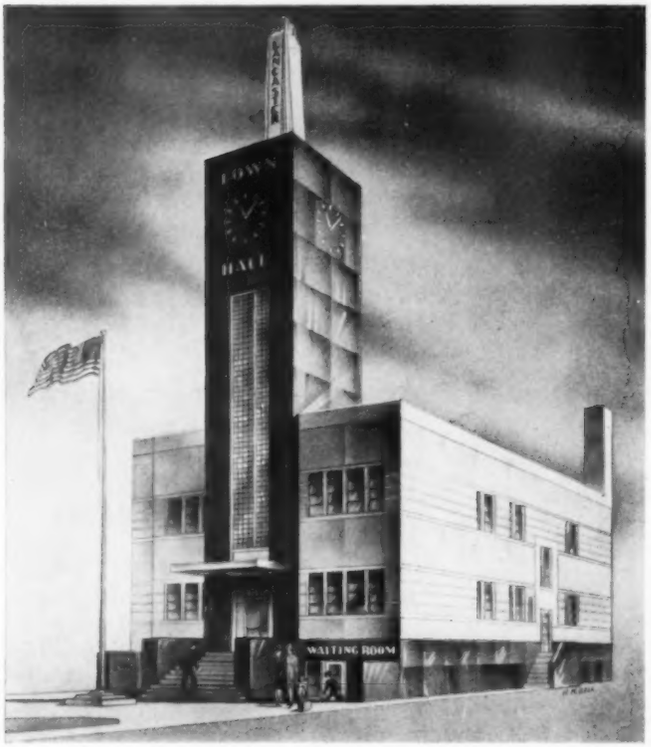
Construction of a six and one-half mile long limited-access express highway at an estimated $15,000,000 cost is planned for Albany's waterfront to relieve traffic on its principal business streets, which are the main north-south routes through the city. This artist's conception, looking northward along the proposed six-lane highway, shows waterfront development, pedestrian overpass to the Hudson River Day Line, and parking fields

The public works program for municipalities in the Empire State is ready to go. Plans are drawn, specifications prepared, and, in many cases, money is ready for construction. Foresighted encouragement by the state accelerated this planning

IF TOMORROW it should be necessary to institute a public works construction program in the United States, New York State's municipalities would be ready. Exclusive of New York City, nearly 400 municipalities have prepared or are preparing plans and specifications for approximately 1,600 separate projects involving a total estimated expenditure of over $178,000,000 in municipal funds. New York City has 1,711 projects approved for state aid in this program calling for expenditure of over $81,000,000; a combined total of more than 3,300 projects whose construction costs will amount to nearly $260,000,000. Many communities have post-war funds available; others have approved bond issues.

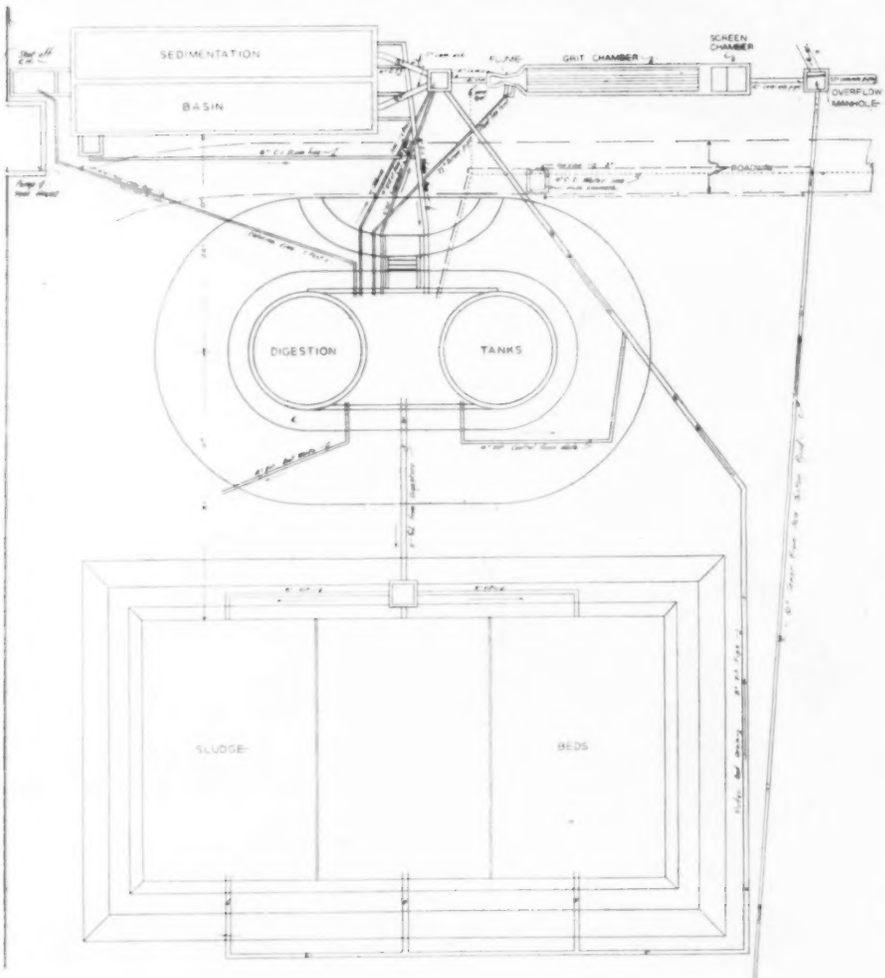
This accelerated program of planning has resulted largely from a simple catalyst applied at the state government level in Albany. In 1943, on the recommendation of Governor Thomas E. Dewey, the state legislature passed a law providing that the state furnish half the funds necessary to prepare plans and specifications for municipal improvements. Since New York's adoption of this program, eight other states have followed suit. The first of these was Michigan, whose law became effective in March 1944. The others, in order of adoption, are Maryland, New Jersey, California, Pennsylvania, Illinois, Indiana, and Washington. All passed substantially the same law as New York's except Indiana and Washington. In the former state, funds are loaned for planning costs and must be repaid within five years, while Washington State has provided its Development Board with $20,000,000 to spend equally on state and municipal projects.

The New York law is simple and straightforward. Any municipality or district may apply, and the application receives prompt treatment that quickly sifts out the fly-by-night proposals and encourages the sound ones. The application is made to the State Postwar Public Works Planning Commission whence it is routed to the Department of Public Works for engineering review. Here, other state departments are consulted, such as the State Health Department on water, sewage, swimming pool, and sanitation projects, and the State Education Department on school projects. Finally, a careful investigation of the municipality's finances is made through the State Comptroller, who informs the Commission whether a community can undertake a particular project without placing undue burdens on its taxpayers and whether its bonded debt will remain within constitutional limitations if funds have to be borrowed.



LEFT: *Face-lifting and interior alterations on the 52-year old town hall will enable officials of the Erie County town of Lancaster to provide modern service in this modern building. The remodeling will cost $59,720. Chester Oakley and Arthur G. Leupold, Buffalo, N. Y., drew up the plans*

BELOW: *Canastosa has plans for a sewage treatment plant which will follow the design outlined below*



When the project has received the blessing of the various state agencies concerned, the Commission votes approval or disapproval of the application. If it approves, the state enters into a contract with the municipality in which the state agrees to pay half the cost of preparing plans and specifications. In turn the community agrees to produce the remaining half of the cost of the plans and to submit the plans to the Commission within a certain time. The total cost of the plans is the usual accepted basis of 4% of construction costs. The results have been encouraging.

The New York State Postwar Public Works Planning Commission consists of John E. Burton, chairman, Director of the Budget; Charles D. Breitel, counsel to the Governor; Martin P. Catherwood, Commissioner of Commerce; Frank C. Moore, State Comptroller; D. Mallory Stephens, Chairman of the Assembly Ways and Means Committee; Arthur H. Wicks, Chairman of the Senate Finance Committee, and Julius J. Gans, member of the Assembly from the Bronx. Holden A. Evans, Jr., is executive secretary, and Joseph O. Heck is executive assistant in charge of the municipal program.

Front Cover Pictures

The pictures on this month's front cover are architects drawings of post-war projects in Richfield Springs and Scarsdale, N. Y. At the top is a municipal building to be erected in Richfield Springs, a well-known spa, at a cost of $36,540. It will include an auditorium and a fire station. Myron A. Jordan of Richfield Springs is the architect.

A police station for Scarsdale, Westchester County, is shown at the bottom. The station will have adequate detention quarters for men and women and other needed police facilities that are lacking now in the present overcrowded joint fire and police building. This project will cost an estimated $124,730. Plans were prepared by Harold G. Webb, New York Ctiy.

A Community Service Experiment That Works

New division in Kansas City, Mo., welfare department promotes community planning and community responsibility

THE Department of Welfare in Kansas City, Mo., is probably the oldest municipal welfare department in the United States and is in no way a relief agency. As its Director, Hayes A. Richardson, declares, "It is the human side of the city government, interested in the people who live on either side of the streets as Public Works is interested in the street." These words are from a letter Mr. Richardson wrote last month to THE AMERICAN CITY describing the work of a new Division of Community Service recently set up by the Department to promote community planning and community responsibility with particular emphasis upon meeting the needs of youth. Community workers in this division are located in each of the high school districts in the city and make it their job to know the problems and resources of their communities and to work with them. These workers serve as coordinators for the community councils, which are the extra-governmental units that make up the heart of the Community Service program.

When the councils were first suggested, the Service Division distributed several pamphlets setting forth the general aims and organization of the councils, whose chief function would be to furnish the citizens of each district with a permanent organ of consultation and action. Such neighborhood councils provide a clearing house through which schools, churches, police, and civic and social agencies may exchange information and coordinate their programs. Each council is made up of the representatives of people in a given district answerable to no one except the people in their neighborhood. The Welfare Department coordinator helps the council carry out its plans but has no vote in the council.

A Junior Officer Organization has also been sponsored by the Community Service Division as an effective means of training children in "junior citizenship." A handbook published by the city last year explained the municipal government structure, set forth the steps for organizing a junior officers' group and suggested possible programs, projects, and fields of interest for groups already organized. The Community Service coordinators work with these groups as well as with the adult councils, and the names of the workers in the various school districts are given in the handbook.

Mr. Richardson's letter contains an interesting review of the current activities of these various units in the Community Service Division:

"We are getting out each month, for the benefit of our department and the community councils, a twelve- or fourteen-page mimeographed statement on social statistics in Kansas City, entitled "Pulse of the City." This pamphlet brings together such statistics as the following: building permits, births, infant deaths, reportable diseases, venereal diseases, divorce and domestic discord, child neglect, juvenile delinquency, and adult offenders. These statistics are for the purpose of giving us the basis for understanding the problem areas. The Junior Officers have a radio program every Saturday morning in which children from various sections of the city participate. Also Junior Officers have been used as a basis for government in some of the elementary schools. One school, for example, has set up its government entirely through Junior Officers with certificates signed by the mayor, city manager, director of welfare, community worker and youth worker designating the school as a city and its government as modeled completely after the city government. The Community Service Division has also activated community groups into setting up 'teen towns' where we, through our Recreation Division, give advice, but the 'teen towns' are separately incorporated, financed, and run by community groups.

"We are finding that people are beginning to take an interest in their government as something of which they are a part, and that they have a method whereby they can approach and discuss, as stockholders, what they would like to have done, recognizing at the same time that these things they need to have done have to be paid for."

How Application Should Be Made for FWA Planning Funds

APPLICATION for an advance of Federal Works Agency funds for non-federal public works planning should be made on BCF Form 3 Revised, "An Application for Advance for Plan Preparation for Non-Federal Public Works." An original and five copies must be prepared; two to be retained by the applicant and the three remaining to be submitted to the appropriate division office of the Bureau. Each application should cover one specific public work, something that the applicant expects to construct as a single work. It should not cover a general improvement program, even of a particular type, such as a water improvement program, unless the applicant expects to construct the entire program at one time or will be prepared to repay the total advance when construction is undertaken or started on any portion of it.

This information is taken from a FWA Bureau of Community Facilities' sheet of instructions for applicants which is entitled "Advance Planning for Non-Federal Public Works." The Bureau of Community Facilities has the responsibility of administering Title V of the War Mobilization and Reconversion Act of 1944 and Public Law 269, 79th Congress, approved December 28, 1945, authorizing the Administrator to make advances of funds to non-federal public agencies to assist in plan preparation of public works.

Application forms may be obtained from and shall be submitted to the appropriate Division Office of the Bureau of Community Facilities, Federal Works Agency, at the following locations—

For projects in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont:
101 Park Avenue, New York 17, N. Y.

For projects in Delaware, District of Columbia, Maryland, Ohio, Pennsylvania, Virginia, and West Virginia:
1729 New York Ave., N.W.
Washington 25, D. C.

For projects in Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee:
114 Marietta St., N.W., Atlanta 3, Ga.

For projects in Illinois, Indiana, Kentucky, Michigan, and Wisconsin:
Room 1506, 20 N. Wacker Drive
Chicago 6, Ill.

For projects in Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota:
700 Mutual Building, Kansas City 6, Mo.

For projects in Arkansas, Louisiana, Oklahoma, and Texas:
710 Electric Building
Fort Worth 2, Texas

For projects in Arizona, California, Hawaii, and Nevada:
2223 Fulton St., Berkeley 1, Calif.

For projects in Alaska, Idaho, Montana, Oregon, and Washington:
Room 511, 618 Second Ave.
Seattle 4, Wash.

For projects in Colorado, New Mexico, Utah, Wyoming:
1631 Glenarm Place, Denver 2, Colo.

The Hunt for a World Headquarters Site

By C. McKIM NORTON
Executive Vice-President
Regional Plan Association
New York

ON SATURDAY, January 5, a seven-man Inspection Group* arrived in New York to find and recommend sites for the permanent world headquarters of the United Nations, and interim facilities for use while the world capital is being built. With an American secretary, Huntington Gilchrist, to act as guide, this group, all of whom spoke English, had a month in which to work under the following terms:

The Inspection Group was to consider sites to include "provision for an airport, radio station, wide belt of parkland around the headquarters and suitable landscaping for area devoted to public buildings, dwellings, shops, accomodation for delegations and visitors, communal services and utilities, recreational grounds and for expansion of the original installation, so that altogether 40 to 50 square miles might be required."

The areas that the Inspection Group was instructed to explore were "within 60 miles of Boston; between 25-80 miles from New York City, in the Hudson Valley; or east of the Hudson River in New York State or Connecticut; and in the Princeton, N. J., district."

Essential and Desirable Criteria

"Essential criteria" for the selection of sites included local political conditions and general character of local press and public opinion in harmony with the tenets of the United Nations Charter, including freedom from racial and religious discrimination; accessibility to the world at large, and unrestricted and uninterrupted contact with all countries of the world, including a radio station, and an airport available on or near the site.

"Desirable criteria" included "climatic conditions which would not entail hardships likely to affect the health or efficiency of permanent or temporary residents connected with the United Nations; favorable cultural conditions, high public service standards, suitable living accommodations, educational, health, and recreational facilities within reasonable distance; sufficient facilities for the establishment of the necessary offices, and the possibility of acquiring, on satisfactory terms, such land or buildings as the United Nations may need."

"Other points to be considered by the Inspection Group were "sufficient distance from nearest large metropolis, reasonable accessibility to metropolitan cultural, medical, and recreational centers, and beautiful country and setting for site, including route to and from metropolis, and protection of amenities in surrounding areas."

A 2,000-Mile Search

On February 2, after travelling over 2,000 miles through fair weather and foul by motorcade, bus, and blimp; entering mansions on the Hudson and surprising a Princeton family on its terrace overlooking a view of the Sourland Mountains; listening to a broadcast of the opening of the first United Nations Assembly over the late President Roosevelt's radio in his house at Hyde Park; hearing the advantages of New York, New Jersey, and New England towns from local spokesman; conferring with five governors and many times that number of mayors and local officials—the Inspection Group picked, as the site to be recommended to the full Interim Committee on Headquarters of the United Nations in London, a bi-state area in eastern Westchester County (N. Y.) and western Fairfield County (Conn.), known as the North Greenwich-North Stamford area. Three other sites were also mentioned as possibilities: "Blue Hills" (12 miles south of Boston), "North Shore" (northeast of Boston), and "Hyde Park" (in the mid-Hudson Valley).

Planning Consultants Retained

In all, fourteen districts had been visited, as indicated on the accompanying map. The Inspection Group was pressed for time throughout its visit, since its report had to be rendered in London before the beginning of the last scheduled week of the United Nations assembly session which started on February 11. To expedite its work, the Inspection Group retained seven planning consultants to report on the practicability for buildings and layout of districts which interested the Inspection Group most. Selected for this work and the areas assigned to them were: Frederick J. Adams (North Shore, Mass.), Russell VanNest Black (Hyde Park, N. Y.), Arthur C. Comey (Boylston-Shrewsbury, Mass.), Ernest P. Goodrich (North Greenwich-North Stamford, Conn.), Rowland B. Greeley and Joseph D. Leland (Blue Hills, Mass.), and Harold M. Lewis (Amawalk-Westchester, N. Y., and Ridgefield-Poundridge, N. Y., and Conn.). Malcolm Pirnie rendered supplementary reports on water supply, sewage disposal, and drainage facilities for the districts in the New York metropolitan area.

General information on all of the districts was furnished by the Regional Plan Association, for the New York metropolitan area, and G. Holmes Perkins (Harvard Department of Regional Planning) for the Boston metropolitan area. In addition, more than 150 brochures, maps, and other exhibits were furnished the Inspection Group by states, local communities, and committees, including a "Memorandum on Prospects for Further Territorial Expansion of the New York Metropolitan Region" prepared by Frederick P. Clark, Planning Director, and C. Earl Morrow, Chief Planning Engineer, of the Regional Plan Association.

How Near a Great City?

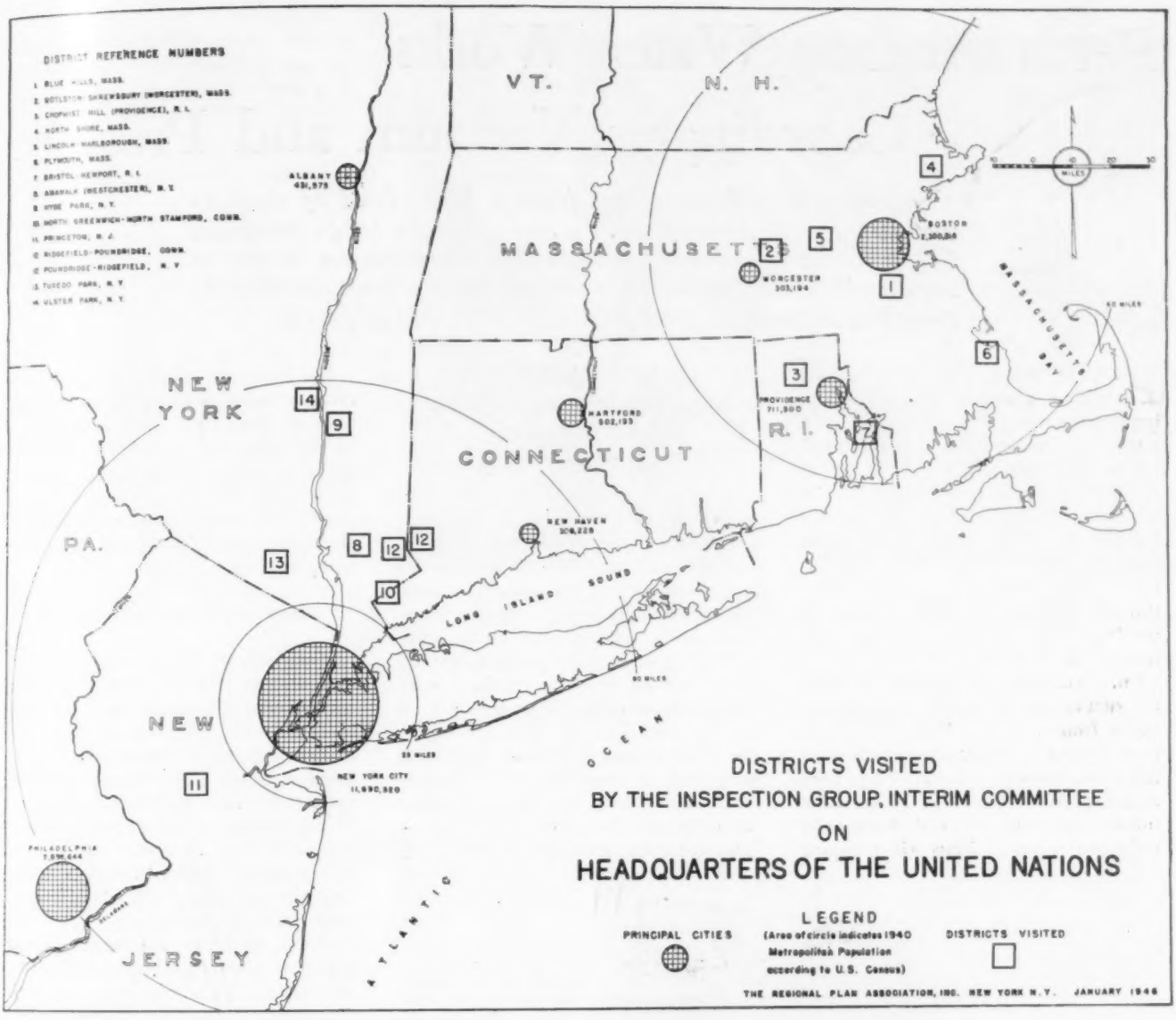
In its report and recommendations, the Inspection Group stated:

"We gave much thought to the question whether the permanent headquarters should be located as close as possible to a great city, or whether it should be located some distance away. A more distant location would have the advantage of making it easier, in course of time, for the headquarters to develop an independent existence and personality of its own. It would run less danger of becoming involved in the life of the city, and the secretariat and members of delegations would probably find that they were less distracted in their work. On the other hand, such a city could not come into existence for many years and even when it did it would be quite impossible for it to provide anything like the cultural or recreational opportunities offered by such cities as New York and Boston. In the meantime the isolated manner in which members of the secretariat would have to live might well be prejudicial to the work of the Organization. For these reasons we feel strongly that no site would be selected which could not be reached by road or rail within an hour and a half."

How Large a Site?

The possible extent of the United Nations Headquarters area (40-50 square miles) has received considerable comment since it was announced. A clear picture has not emerged as to exactly what kind of community will develop in the proposed world capital.

* (Dr. Stoyan Gavrilovic, Yugoslavia, Chairman; Dr. Shu Hsi-hsu, China, Vice-Chairman; Francois Briere, France; Major K. G. Younger, United Kingdom; Julio A. Lacarte, Uruguay; Awny el-Khalidi, Iraq; and George Saksin, Russia.)



Some envisage a development resembling a university campus with an assembly hall with a capacity of 5,000, related offices buildings, and a small community to house the year-round permanent secretariat. Others foresee a community of as many as 50,000 year-round residents within ten years based on the number of world organizations in addition to the United Nations Organization which may make their headquarters at the world capital. The requirement of a major airport located within the headquarters area plus a protective belt of some kind surrounding the area indicate extensive development. Clarification on this problem is needed before the ultimate acreage of the headquarters area is assembled.

Legal and Financial Problems

A number of legal and financial problems are also raised by the establishment of the world capital. The question as to whether or not the convention to be concluded between the United Nations and its host will vest in the United Nations the full ownership of all the land in the international zone is being studied. A report by the Executive Committee to the Preparatory Commission of the United Nations, published last October, stated:

"The seat of the United Nations could be internationalized in several ways which may perhaps be reduced basically to two systems; an autonomous international zone, or an international zone situated on national territory (e.g. Tangiers). Between these two extremes, there are many possible variants."

Financial problems include the effect on existing indebtedness and the tax base of the localities in which the headquarters is located.

The questions of population displaced by the United Nations Headquarters is also receiving serious consideration. It has been pointed out that the temporary headquarters, recommended by the Inspection Group to be located in New York City, will be occupied for at least two to three years during which period the immediate acute housing shortage may be eased. In its report and recommendations the Inspection Group stated:

"Those with whom we discussed the possibility of evacuating all the local population from such an area pointed out the good-will value of avoiding such a steps as far as possible. Moreover, if there is an international community of some thousands of people living at the headquarters, shops, service stations, etc., will be necessary, and it is to be presumed that they will be operated by American citizens. Such American citizens could not strictly be regarded as having any official connection with the organization, but we feel that it would be more desirable to permit them to reside within the zone. We therefore feel that, while the local population would have to be removed from such areas and buildings as are immediately needed by the United Nations, the occupants of other premises within the zone could continue to reside there as tenants of the United Nations until such time as it became necessary to take over their premises, it being understood that the whole area will be acquired by the United Nations from the outset. In recommending sites we have, however, had in mind the desirability of removing as few inhabitants as possible, and in none of the areas mentioned in

(*Continued on page* 91)

Perth Amboy Water Works Coordinates Vacuum and Pressure

Vacuum pumps draw water from a large field of shallow wells in Perth Amboy, N. J., and a single large pressure pump forces the water through the transmission mains to the distribution system. This arrangement allows an efficient centralization of all pumping and control equipment

By JOHN J. REAGER
Superintendent and Engineer
Water Department
Perth Amboy, N. J.

PERTH AMBOY'S water supply utilizes a rather unusual pumping arrangement. We draw water from a thick bed of sand about 40 to 70 feet below the surface through a set of more than 60 wells which range in size from four inches with gauze strainers for the old timers to 12 inches with slotted screens for the newer installations. The wells are interconnected through long suction mains ranging in size from 8 to 36 inches with the mains leading to a central station, where a set of vacuum pumps exhaust air from the suction main, thereby drawing the water from the well field to the station. Here a 9-mgd Morris pump takes the water through a battery of 12 horizontal pressure filters, and long transmission mains to the Perth Amboy distribution system. Thus all pumping operations are controlled at the central plant.

The city reinforces this supply by two wells equipped with Layne pumps and screens. These wells tap deeper aquifiers located some 200 feet below the surface and are each capable of producing 2 mgd. These auxiliary wells are used only during dry periods when other fields do not seem able to carry the load. The water may be pumped either through the treatment plant or sent directly to the transmission mains.

Our water supply is one of our finest municipal assets. It is cool, free from pathogenic bacteria, and comparatively free from minerals that might make it unsuited for domestic or industrial use. We treat it to remove iron and at the same time raise the pH in order to stabilize the water. Both can be accomplished by the addition of lime which precipitates the iron, allowing it to be removed readily by the set of 12 pressure filters. A Wallace and Tiernan chlorinator gives the water a margin of safety insofar as its purity is concerned — a measure really unnecessary in view of the quality of water that the plant receives. The water has a temperature of 64°F.

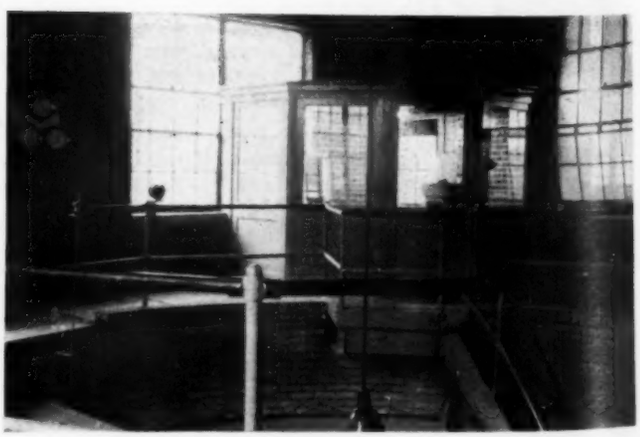
This Layne pump serves as an added safeguard to the plant when heavy demand begins to attack the capacity of the original well fields. Water from it may be delivered to the treating plant or pumped directly into the transmission lines

We have two transmisison lines carrying water from the plant to the city, both of cast iron. One is 24 inches in diameter for its entire length; the other is 30, reduced to 24 when it crosses the Raritan River. To cross the river, both lines were laid in trenches more than 25 feet below the water surface.

High and Low Service Area

These mains empty into a huge 40-mg concrete reservoir, one of the largest covered reservoirs in the world: one of them connects directly with mains running through the southern portion of the city. The distribution system, 66 miles in length, is laid out in a gridiron system and uses pipe varying from 4 to 24 inches in diameter. The system is divided into a high and low service area. The high service receives water by repumping from the reservoir, and has an equalizing standpipe of 750,000 gallons that floats on the system. The low service works through gravity from the reservoir or by direct pumping from the water plant. Two smaller standpipes, of 150,000 and 200,000-gallon capacity, also float on the system.

The water department also serves the municipalities of Raritan Township, Borough of Sayreville, Borough of Spotswood, and Keasby section of Woodbridge Township, or an estimated total population of 60,000. The entire system contains about 36½



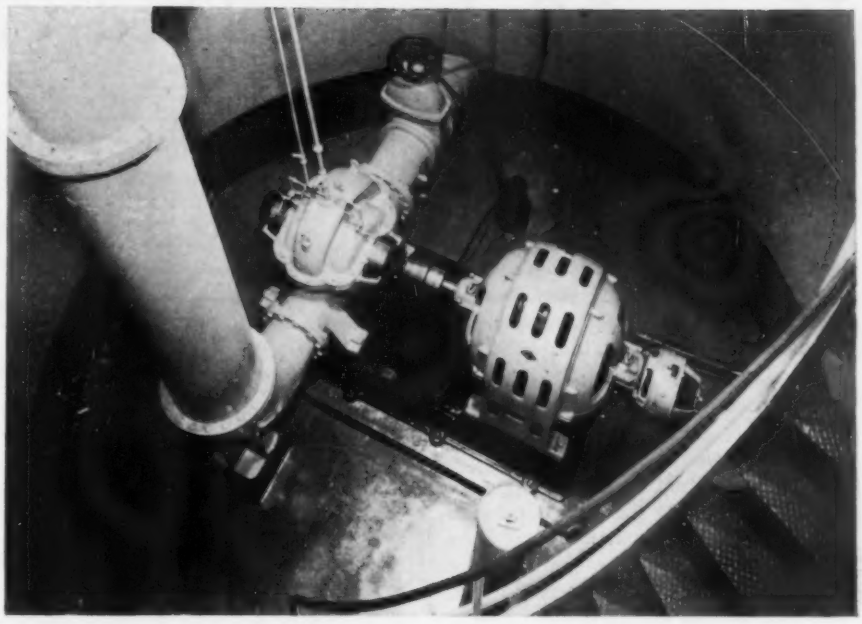
The glassed-in enclosure shown in the corner of the room represents a safety feature developed by Superintendent Reager. In it are located the chlorinators and chlorine containers. It is built solidly so that if anything should happen to the chlorinators no chlorine gas would escape into the operating room. The well in the foreground holds the main pumping unit

miles of transmission mains varying from 8 to 30 inches and 66¼ miles of distribution mains ranging from 4 to 24 inches. The system has about 9,000 services.

Industries Large Users

Perth Amboy has a population of 43,500 and uses an average of 7.75 mgd or 175 gallons per capita per day. This high figure may be explained by the fact that more than half of the water consumed is used by local industries. Total pumpage that the plant delivers to all consumers is 8½ mgd or a per capita daily consumption of 140 gallons for the 60,000 people served.

Water rates are scaled to make them attractive to users of large quantities, such as industries. The department furnishes water to fraternal organizations, charitable institutions, hospitals, churches and the YMCAs free of charge.



This big Morris pump carries the heaviest portion of the load at the Perth Amboy plant. A similarly located Worthington pump, older in service, is used for standby

Public Works Projects in Small Cities and Methods of Financing

OVER 600 public works projects will be started by 369 small cities in the country this year if labor and materials are available, the International City Managers' Association reports. The Association surveyed 962 cities between 5,000 and 10,000 population concerning their plans for public works projects and their methods of financing them. Reports were obtained from 779 cities. Of the number reporting nearly half, or 369, indicated that they will begin construction on new municipal facilities or buildings during 1946 if labor and materials can be obtained.

One hundred and thirteen, or 30% of the 369 cities reporting on a method of financing, will use cash reserves to finance their projects. Seventy-one cities intend to issue general bonds, 48 will issue revenue bonds, and 28 will use current tax revenues. Only two cities will levy special assessments and three will depend upon federal or state aid.

Two or more methods of financing will be used by sixty-three cities, the more frequent combination being reserves plus current taxes, revenue bonds, or general bonds.

Three hundred and nine stated that they are not undertaking any public works projects this year, 59 reported that they are uncertain, and 42 did not reply to the question concerning their plans for public works.

Sewerage projects head the list of public works which cities want to undertake during 1946. There are 139 cities which intend to build sewer improvements with plans ranging from sewage treatment plants to sewer line extensions. Water utility projects are next with 127 cities reporting plans to construct water softening plants, water main extensions, or additions to water plants.

Of the 86 sewerage improvements whose financing was reported, 31% will be financed from general bond issues, 30% out of accumulated funds, 22% with revenue bonds, 11% from current taxes, and the remainder from special assessments or utility reserves plus state aid.

Cash reserves will pay for 49% of the 91 water utility projects for which the method of financing was indicated. Of the remaining water projects, 18% will be financed from general bond issues, and 11% from current tax levies. A few projects will be financed by a combination of two methods.

Other projects include libraries or recreation facilities planned by 77 cities; street improvements, 41 cities; electric power and light improvement, 37; airport and airport facilities, 35; municipal buildings, 30; garages and equipment buildings, 22; and first stations, 21. A smaller number of municipalities will build incinerators, storm sewers, schools, hospitals, police stations, and gas utilities.

Street projects in 25 cities will be financed from general bond issues, in six cities with reserve funds and in two cities from current taxes. Special assessment financing was mentioned by several cities. Eleven cities are planning storm sewer projects, four to be financed by general bond issues, four by reserves, one by special assessments, and two from current taxes.

A number of cities will start sizeable post-war construction programs in 1946. For example, Kerrville, Texas, lists a sewage disposal plant, airport, administration building, new streets, and sewer extension. Nacogdoches, Texas, plans a sewage disposal plant, a water pumping station, swimming pool, and stadium. The public works schedule of Woodward, Okla., includes a sewage disposal plant, fire station, storm sewers, and improved water facilities. Pittsburg, Calif., which has postponed construction until 1947, is planning a new sewage treatment plant, auditorium, water filter plant, storm drain system, and a railroad grade crossing. Other cities planning a number of varied projects include Coronado, Calif.; Junction City, Kans.; Owatonna, Minn.; Presque Isle, Me.; and Sequin, Texas.

Parking Meters in 42 More Cities

DURING 1945 and mostly since VJ-Day, parking meter contracts were awarded by two hundred cities. Due to reconversion and strike difficulties only sixty installations have been made and 42 of these are in cities which did not previously operate parking meters. This brings the total number of parking meter cities to 474.

Hartford Seeks Simplified City Government

IF THE mayor of Hartford wanted to call a cabinet meeting he would have to provide seats in his public function room for at least 132 individuals.

"He could not conduct the meeting in the manner common to business organizations where a chairman presides over a small board of directors, all seated at a conference table.

"If the mayor chose to invite the members of the Board of Aldermen to join his cabinet meeting, twenty more places would be needed.

"The city's chief executive might, of course, invite only the full-time heads of the various departments. That would reduce the number to more manageable size, but the mayor might find that he had offended many of the 101 board members who were not asked to attend."

These facts are cited by the Governmental Research Institute, Inc., of Hartford, Conn., in a recent report on

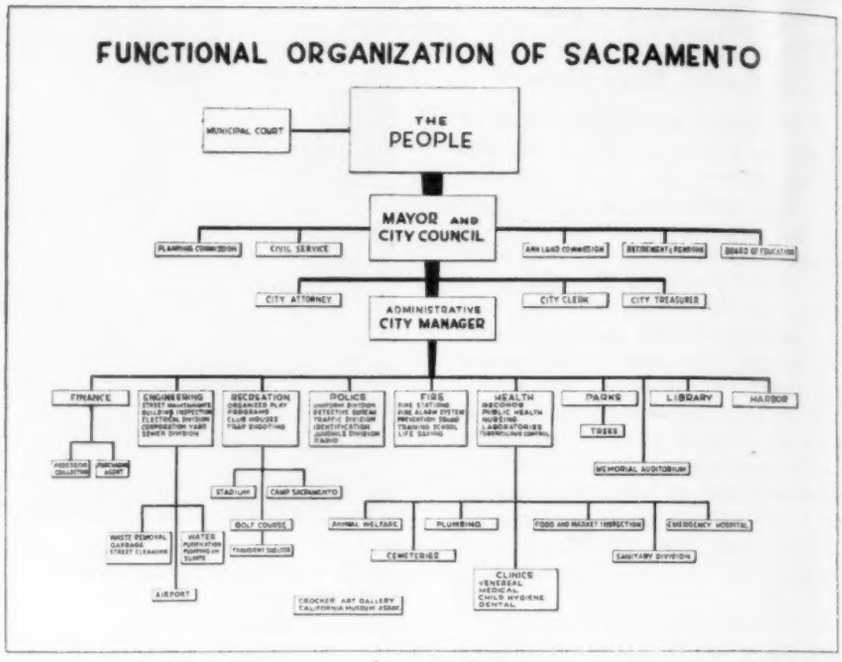
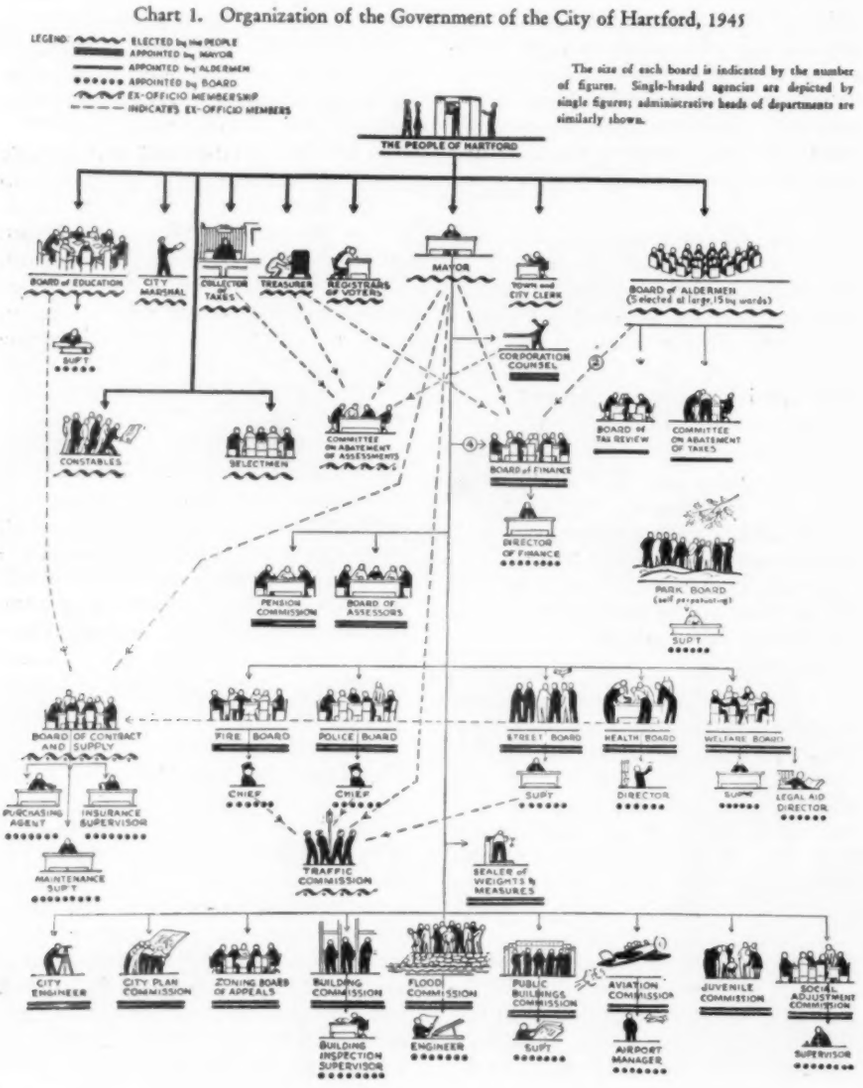


Chart 1. Organization of the Government of the City of Hartford, 1945



the reasons why Connecticut's capital city needs a new municipal charter.

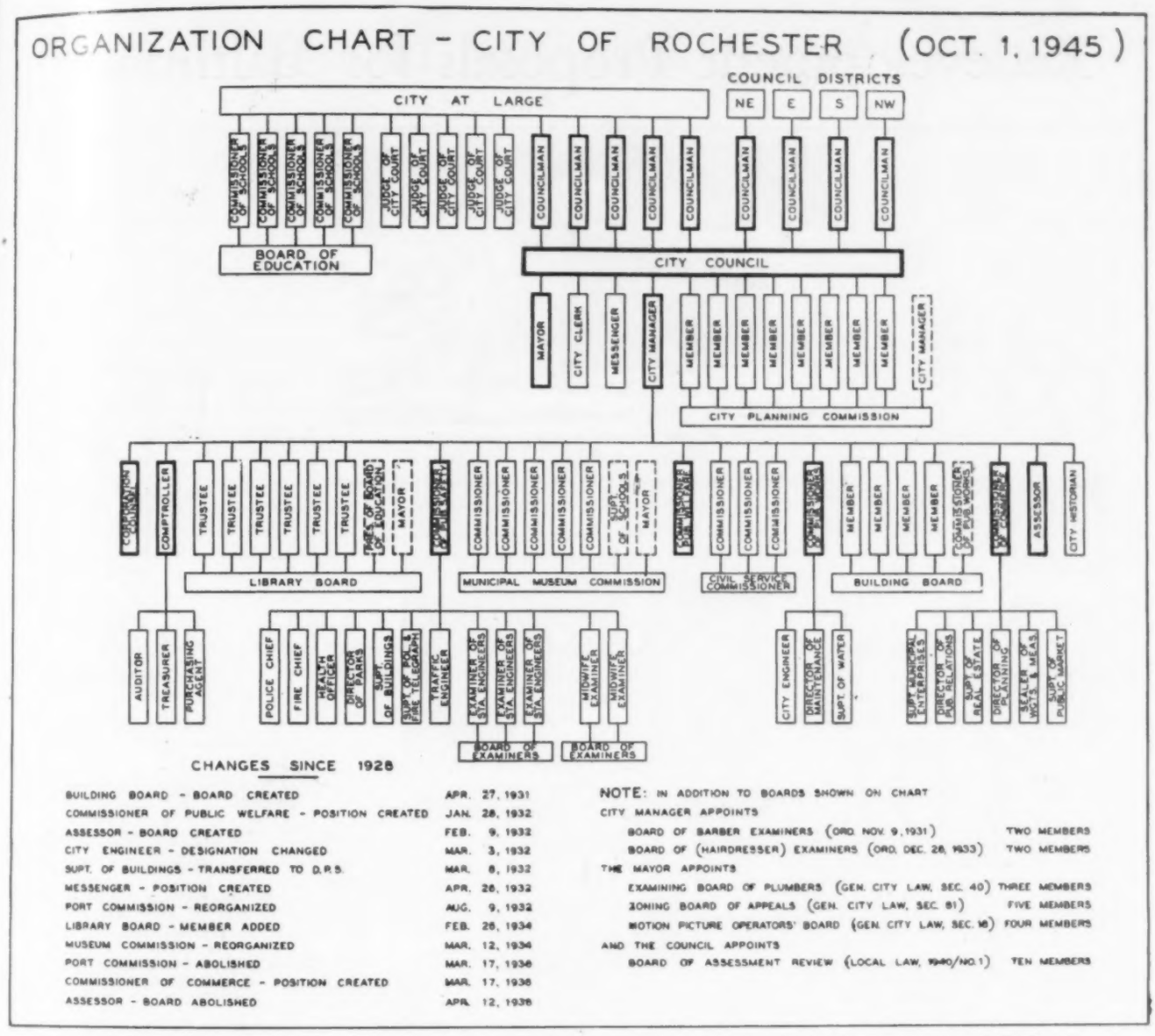
Among other handicaps to efficient government under the present charter are the fact that Hartford voters elect no fewer than 48 officials of the municipality, and the fact that:

"Upon assuming office the mayor customarily lays down a program of objectives, thereby lending credibility to the popular expectation that he should get things done, and providing fuel for the fires of his critics if the results do not follow. At once he makes numerous appointments to the several boards and commissions. Actually the responsiveness of these bodies to the policy desires of the chief executive may be completely lacking in the first year. As a Hartford mayor once stated in his annual message 'the city is actually in the control of the predecessor of the mayor during the first year of a new mayor's term.' This will readily be seen when it is realized that out of a six-man board the mayor makes but two appointments upon inauguration. Thus he must have been returned to a second term before he can work with boards entirely of his own selection; even then, as experience has demonstrated, he cannot be sure that his wishes as to public policy will be respected.

"Therefore, in spite of the fact that the mayor makes 94 appointments without council confirmation, and though he has strong emergency powers and is ex-officio a member of most of the city boards, Hartford's charter is definitely of the 'weak-mayor' type."

The complexity of the present hydra-headed government is graphically shown in the accompanying chart.* In

* The chart omits: the police and city courts, the judges which are appointed by the legislature or by the governor if the legislature fails to act; the Housing Authority, whose members, under the provisions of a general act, are appointed by the mayor, and 45 justices of the peace who are elected biennially in conjunction with the state elections.


ORGANIZATION CHART - CITY OF ROCHESTER (OCT. 1, 1945)
COUNCIL DISTRICTS
CITY AT LARGE
NE
E
S
NW
BOARD OF EDUCATION
CITY COUNCIL
MAYOR
CITY CLERK
MESSENGER
CITY MANAGER
CITY PLANNING COMMISSION
LIBRARY BOARD
MUNICIPAL MUSEUM COMMISSION
CIVIL SERVICE COMMISSION
BUILDING BOARD
AUDITOR
TREASURER
PURCHASING AGENT
POLICE CHIEF
FIRE CHIEF
HEALTH OFFICER
DIRECTOR OF PARKS
SUPT. OF BUILDINGS
SUPT. OF POL. & FIRE TELEGRAPH
TRAFFIC ENGINEER
EXAMINER OF STA. ENGINEERS
MIDWIFE EXAMINER
BOARD OF EXAMINERS
CITY ENGINEER
DIRECTOR OF MAINTENANCE
SUPT. OF WATER
SUPT. MUNICIPAL ENTERPRISES
DIRECTOR OF PUB. RELATIONS
SUPT. OF REAL ESTATE
DIRECTOR OF PLANNING
SEALER OF WGTS. & MEAS.
SUPT. OF PUBLIC MARKET
ASSESSOR
CITY HISTORIAN
CHANGES SINCE 1928
BUILDING BOARD - BOARD CREATED APR. 27, 1931
COMMISSIONER OF PUBLIC WELFARE - POSITION CREATED JAN. 28, 1932
ASSESSOR - BOARD CREATED FEB. 9, 1932
CITY ENGINEER - DESIGNATION CHANGED MAR. 3, 1932
SUPT. OF BUILDINGS - TRANSFERRED TO D.P.S. MAR. 8, 1932
MESSENGER - POSITION CREATED APR. 26, 1932
PORT COMMISSION - REORGANIZED AUG. 9, 1932
LIBRARY BOARD - MEMBER ADDED FEB. 26, 1934
MUSEUM COMMISSION - REORGANIZED MAR. 12, 1934
PORT COMMISSION - ABOLISHED MAR. 17, 1936
COMMISSIONER OF COMMERCE - POSITION CREATED MAR. 17, 1936
ASSESSOR - BOARD ABOLISHED APR. 12, 1936
NOTE: IN ADDITION TO BOARDS SHOWN ON CHART
CITY MANAGER APPOINTS
BOARD OF BARBER EXAMINERS (ORD. NOV. 9, 1931) TWO MEMBERS
BOARD OF (HAIRDRESSER) EXAMINERS (ORD. DEC. 28, 1933) TWO MEMBERS
THE MAYOR APPOINTS
EXAMINING BOARD OF PLUMBERS (GEN. CITY LAW, SEC. 40) THREE MEMBERS
ZONING BOARD OF APPEALS (GEN. CITY LAW, SEC. 81) FIVE MEMBERS
MOTION PICTURE OPERATORS' BOARD (GEN. CITY LAW, SEC. 18) FOUR MEMBERS
AND THE COUNCIL APPOINTS
BOARD OF ASSESSMENT REVIEW (LOCAL LAW, 1940/NO. 1) TEN MEMBERS

Hartford's organization is contrasted with that of council-manager cities in these charts of Sacramento and Rochester

contrast, THE AMERICAN CITY presents the organization charts of two cities—Rochester, N. Y., and Sacramento, Calif., one somewhat larger and the other somewhat smaller than Hartford, having the council-manager form of government.

Publication of the Governmental Research Institute's report has been followed by the organization of a Hartford Charter Commission of nine citizens appointed by the mayor in accordance with a resolution of the Board of Aldermen. This Commission has held several public hearings, at one of which three former mayors and the mayor himself (now a former mayor) endorsed the city manager plan. One of the former mayors made the statement that he thought a strong-mayor charter might have a greater chance of passage. For the last three or four meetings the Commission has heard from department heads and from members of the Board of Aldermen.

Under the ordinance appointing the Charter Commission, the report is to be in final shape by August 10, 1946. The new charter will be submitted to a referendum at the same time as the state election in November 1946, and if approved, it will be sent on to the legislature for ratification. The latter procedure is necessary because of the lack of any home rule law in Connecticut.

Copies of "City Government in Hartford" are available on application to Leslie M. Gravlin, Director, Governmental Research Institute, 15 Lewis St., Hartford 5, Conn.

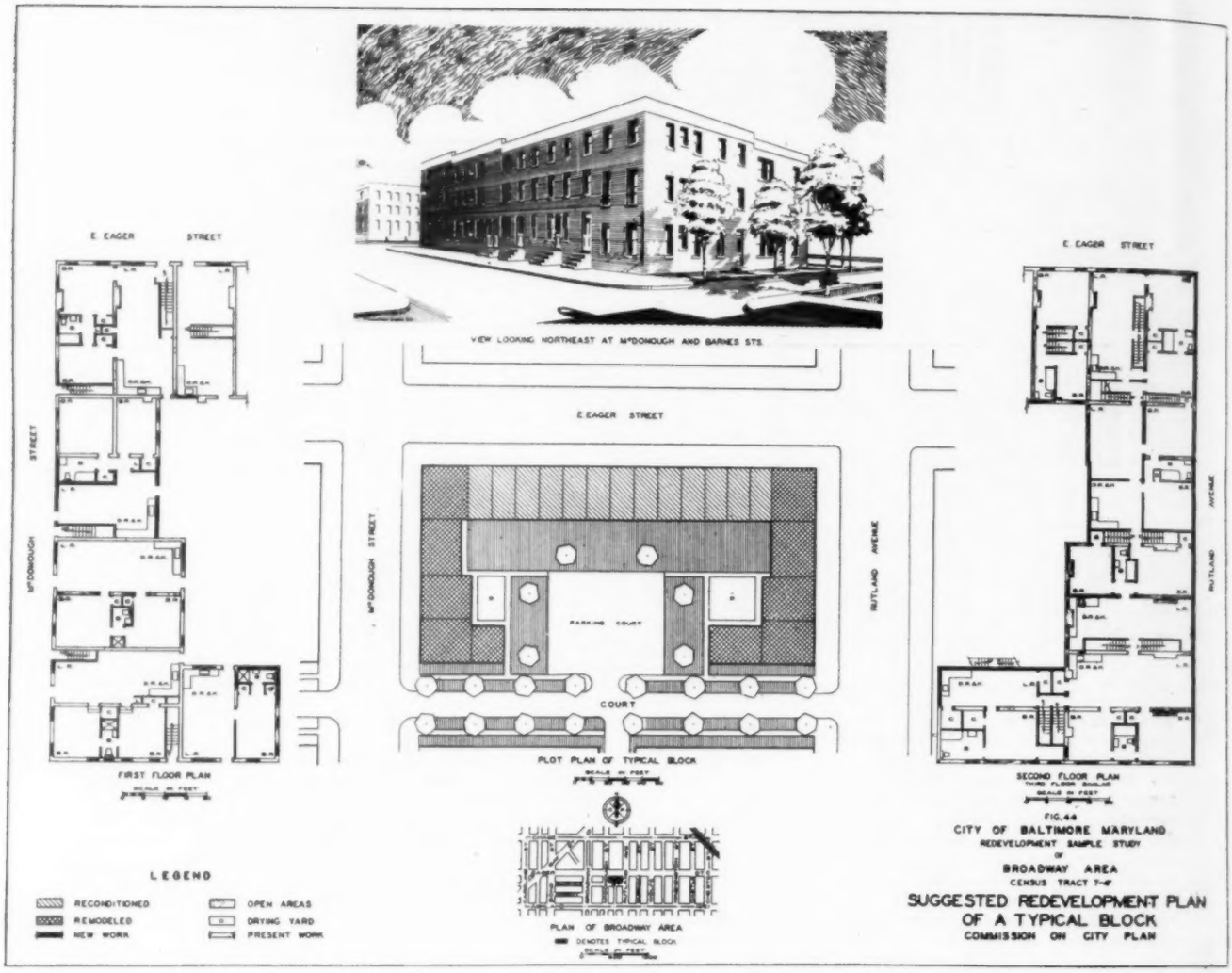
The Hunt for a World Headquarters Site

(Continued from page 87)

this report are more than about 3,000 people involved. We have, however, made it clear to the competent authorities in all districts that the United Nations must reserve the right to clear the territory should this be necessary at any time."

After some close voting, the full Interim Committee on Headquarters of the United Nations approved the report of its Inspection Group and voted to locate the permanent headquarters in the Fairfield-Westchester section of the New York metropolitan area. The exact location of the site, its size and cost, will be determined by a newly appointed nine-nation committee which is expected to arrive in New York this month and report its findings to the Assembly in September. The practical job of land assemblage and related legal problems will not begin until the Assembly takes final action. Meanwhile, arrangements for interim facilities in New York City are well under way.

Redevelopment Proposals for Baltimore



A REPORT of the Commission on City Plan of Baltimore entitled "Redevelopment of Blighted Residential Areas in Baltimore" was published and released officially by Mayor Theodore R. McKeldin in January. The study was carried out by the staff of the Commission with Henry Vincent Hubbard of Boston as consultant. It is intended as a guide for the Baltimore Redevelopment Commission which was appointed last summer and for other agencies dealing with the housing problem.

In Baltimore the preparation and development of the Master Plan is the primary responsibility of the Commission on City Plan; while the essential function of the Redevelopment Commission is the assembly of blighted or slum areas at the best available price by purchase or condemnation, and their resale to public or private agencies at a price which will allow development in accordance with the state enabling act to do away with blight and slum conditions.

The report is thorough and detailed and is carefully and amply supplemented with tables, maps, appendices, and illustrations, of which the suggested redevelopment plan for a typical block shown here is one.

The general discussion of the detection and scope of blight and the factors in the city bearing upon the problem is followed by a detailed study of five sample areas which are compared with one another and with the city as a whole. Two project areas are fully treated, the status of federal housing, and the subject of private moderate rent housing explored.

The recommendations cover revision of zoning laws and plans, choice of methods of subsidy, mandatory referrals to the Commission, disposition of federal war construction, metropolitan area cooperation on this and other problems, the long-term city budget and priorities, and, finally, the suggestion that, since federal corporate income taxes are of such great importance in determining the participation of private capital in low-cost housing, "the Mayor and Council should familiarize themselves carefully and constantly with federal legislation now being proposed, and see that their representatives in Congress are informed of their desires."

City Signs Union Agreement

WILLMAR, Minn., recently concluded a city-union agreement, the International City Managers' Association reports, recognizing the union as the representative for all classified employees except those in "appointive positions." The standard work week is reduced from 48 hours to 44 hours, with pay at time and one-half for work after eight hours per day, 44 hours per week, and for all holiday labor. The agreement also raises vacation leave from one to two weeks, and establishes sick leave to be accumulated at the rate of one day per month, with a maximum of 50 days.

Flood-Induced Sewerage Improvements

The sewage treatment plant at Marshalltown, Iowa, learns about flood protection the hard way

MARSHALLTOWN'S sewage treatment plant serves a population of approximately 18,000 and, along with the normal amount of sewage, treats difficult seasonal canning and packing house wastes. The plant encountered the typical troubles during the war, but record-breaking floods which nearly floated the treatment plant away raised additional and entirely new operating problems.

It was Tom Lovell, Superintendent-Engineer for the Marshalltown, Iowa, sewage treatment plant, who—though already coping with wartime shortages and extra paper work—had to bear the brunt of the trouble. Superintendent Lovell's versatile little plant treats the sewage by sedimentation and sludge digestion, followed by activated sludge for secondary polishing. The design is based on an ultimate flow of 4 mgd.

How the Plant Operates

Sewage from two interceptors flows first through a diversion chamber equipped with a remote-controlled motor-driven gate. This gate was designed to allow sewage flows exceeding plant capacity to bypass the plant. The sewage then enters through a manually cleaned bar screen, and passes through two 25-inch comminutors into the pump wet well. Here three pumps with a combined capacity of 14 mgd against a 28-foot static head, powered either by electricity or Climax gas engines, lift the sewage to make it pass through a pair of grit channels with Chain Belt removal mechanisms. The grit and sand are there removed, washed, and hauled away to be used for fill material.

The sewage, upon leaving the grit chamber, goes to an American Well Works preaeration tank which removes grease and scum. These skimmings go to a sump and are pumped directly to the digesters. Leaving the preaeration unit the sewage either flows through a chemical mixing tank or directly to three combination flocculator-clarifiers with a detention of about two hours at design flow.

The effluent from these clarifiers then begins its secondary treatment bypassing into a channel with the return activated sludge. This mixed liquor then goes to the four aeration tanks by means of two aerated feed channels. At design flow and with a 30 percent return of activated sludge, these tanks provide an aeration period of about 6.5 hours. They are of conventional two-pass design and are equipped with Chicago swing diffuser units for tapered aeration. The mixed liquor then goes to a final settling tank and the effluent is routed through a partially open chlorination channel to the outfall sewer.

The plant receives much of its power from Climax engines burning digester gas. This power is used by the blowers for the preaeration tank and the activated sludge process. The engines heat the digestion tanks both through the engine jacket water and through heat from the exhaust. The digestion tanks are equipped with PFT floating covers to collect digester gas. For gas storage there is a Chicago Bridge and Iron steel pressure tank with 13,000-foot capacity capable of storing the gas at 50 pounds psi.

Originally the design called for sludge dewatering with vacuum filters. However, early in the plant's operation the use of the filters was abandoned in favor of sludge lagooning since ample low ground was available.

The plant also has equipment for the manufacture of ferrous or ferric chloride from iron scrap and chlorine by the Scott-Darcey process to provide chemical treatment of seasonal cannery wastes.

Storm Causes Trouble

In April 1944 the plant was going into its fifth year of operation without any apparent complications. Two of the gas engines had been overhauled and the third would have been similarly cared for had parts been available. Air diffuser tubes from the aeration tanks had been cleaned and replaced and the steel rods used in making up the diffuser tube assembly were renovated. However, on May 4 the first of the unanticipated difficulties arose.

A storm hit Marshalltown. The Iowa River rose rapidly, overflowed its banks, and washed through the sludge lagoon, spreading out over the low ground south and east of the plant. Flood waters subsided within a few days but excessive sewage flows continued, largely because of infiltration.

Then during the night of May 18 a second storm arrived, an electric storm coupled with heavy rainfall. The electric power lines were damaged, thus forcing the plant to rely en-

A calm day in Marshalltown when the river did not get out of hand

tirely on its gas-powered pump. This pump did not have sufficient capacity to handle the sewage flows and consequently the level of the sewage in the wet-wall rose high enough to submerge both comminutor motors. One motor burned out. Superintendent Lovell speaks tersely of the lesson that this storm taught him the hard way—put your comminutor motors on the main plant floor level and connect them to the communitors by extension shafts; don't mount the motors in the well below.

Sewage Continues to Rise

The following day the river reached its peak with a stage of 15.96 feet. Linn Creek also left its banks flooding a considerable portion of the south side of the plant area. The waters at the plant rose within four feet of the main plant floor level. By the 20th, however, electric power had been restored and all three sewage pumps were working, discharging something in excess of 12 mgd—their maximum capacity. Despite this, the level of the sewage in the plant continued to rise, threatening to submerge the remaining comminutor motor. As the head on the suction side increased, the discharge of the pumps also increased, overloading the motors until the protective equipment threw them out of service. Consequently it became necessary to lower the sluice gate at the diversion chamber until the proper level could be maintained in the wet well. The sewage flow remained at the high level of over 12 mgd for the next ten days.

When it seemed that the works might float away like an ark, the silt and clay content of the sewage was just right to make the sludge process work beautifully. Dissolved oxygen remained high, sludge index dropped as low as 35, and mixed liquor concentrations as high as 7,800 ppm were carried; return sludge concentrations went as high as 28,000 ppm. Superintendent Lovell points out that the addition of clay to control bulky sludge has definite merit, provided a means can be found to add sufficient quantities. In this case, the storm took care of that.

But the storm was not so considerate the next time. On June 13 ten consecutive days of rain raised the river again to a stage of around 13.4 feet and boosted the sewage flow to 10 mgd. On June 21 the plant operator announced that he could no longer pump sludge from the primary tanks and that the flocculator reels had stopped turning. After by-passing the sewage and draining the tanks, the operator found that the wet well, preaeration tank, flocculators, and part of the primary clarifiers were full of sand and clay. The sand in the flocculators was up and above the shafts of the mechanisms.

This picture was taken during one of the flood stages. Operation, as Superintendent Lovell points out, was "a bit difficult"

"It is hard to understand," said Superintendent Lovell in his annual report on plant operation, "how these units kept operating as long as they did." Later investigations showed that several sections of the interceptor had broken and flood waters draining to the sewer break had created washouts of huge sections of sewer lines.

From June 22 to July 9 the plant was completely by-passed and a major job of sand and clay removal went into full swing. Cast iron sludge lines were dismantled and cleared of sand, and badly worn underwater bearing, shafts, and drive chains in the flocculators were replaced. By July 9, all units had been cleared, temporary repairs were made, and the sewage had been turned back through the primary tanks.

Superintendent Lovell and his crew then made an effort to relieve clogging of diffuser plates in the bottom of the various feed channels. These plates were firmly cemented into place, however, and could not be removed for cleaning. Consequently they were scrubbed with a caustic solution, rinsed, and given spot applications of diluted muriatic acid. This improved matters somewhat. On July 19 the primary tank effluent was turned into aeration tanks and the operators began the process of building a new sludge. On July 27 grit removal and washing equipment was back in operation.

Complete rehabilitation of the plant had to wait until August when new underwater bearings, drive shafts, and drive chains were installed in the flocculators. Lubrication piping was run to all underwater bearings and a daily practice of forcing grease to all bearings was initiated to prevent fine sand from getting into the bearings.

For the remainder of the year the plant had no extraordinary problems. Canning plants produced a waste that was difficult to handle and required all the plant's blowers in order to maintain dissolved oxygen in the liquor. Even then the sludge bulked badly. Later hog killing and chicken canning operations brought about some additional sludge problems. Heavy wasting with the application of chlorine to the return sludge was employed with but indifferent success. These occurrences were more or less common, however, and Superintendent Lovell and his crew will remember that year for more historical events.

Pay Increases for City Employees

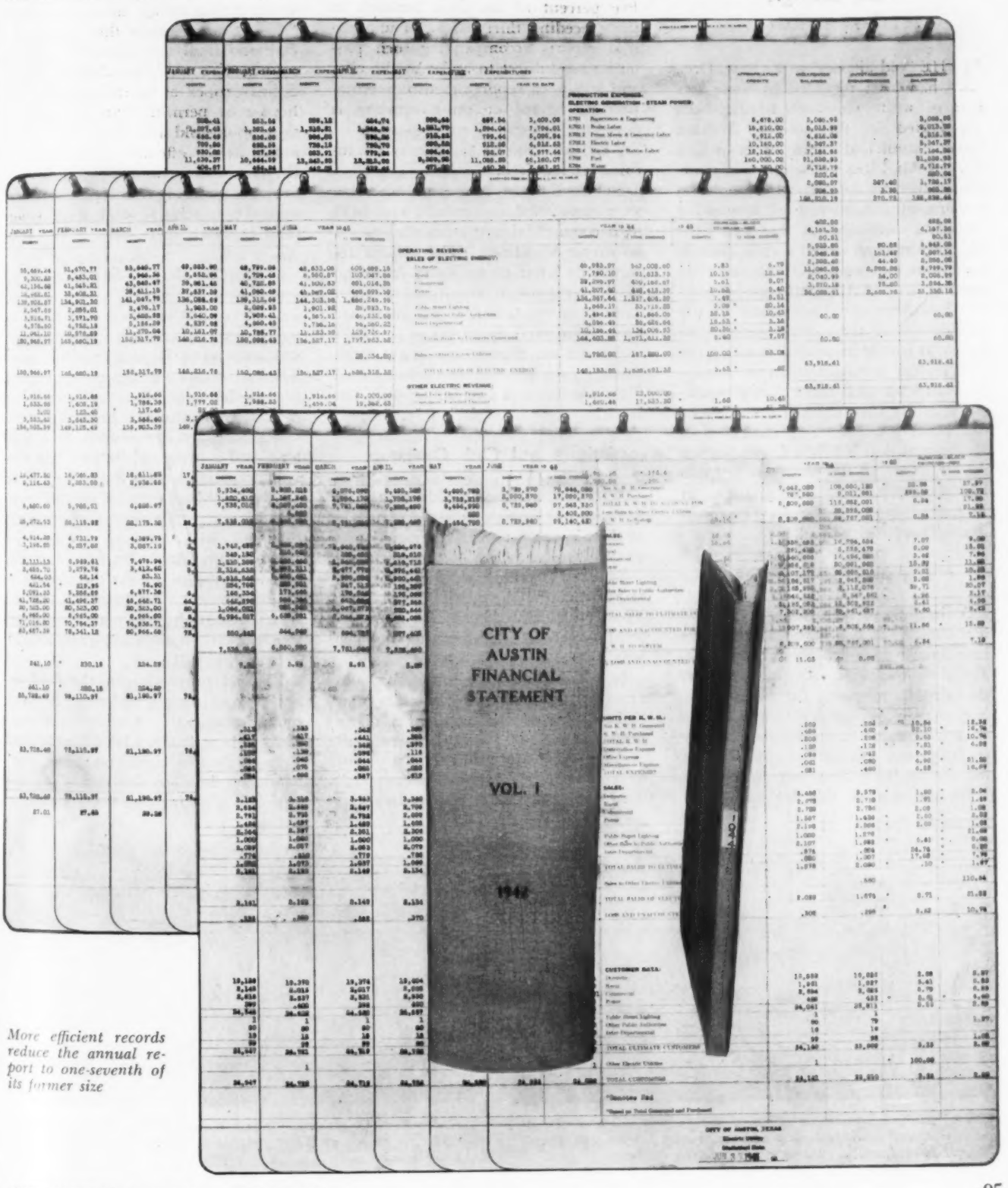
THE Public Administration Clearing House reports that Madison, Wis., has adopted an ordinance basing salary adjustments on a cost-of-living index. . . . Dallas, Tex., has increased salaries of policemen, firemen, and laborers, 5%, in addition to a wartime bonus previously given to employees. . . . Minneapolis recently approved a pay increase of $15 a month for 2,400 municipal employees at a cost of about $500,000 a year. The city council of Cincinnati recently granted 25% pay increases to 4,500 employees at a total cost of $635,000 for the fourteen months ending December 1946. The city council of Seattle granted city employees a basic salary raise of $30 per month effective on the first of this year, in lieu of the present $15 war bonus.

Visible Records Shorten the Annual Report

AFTER the month's business is closed for the city of Austin, Texas, statements are prepared on work sheets from appropriation ledgers and typed on preprinted forms as shown here. These are filed in a ring binder in which each month and the year to date are visible with a comparison with the same periods of the previous year, and also the percent of increase or decrease over the previous periods for each activity and account number. This system of reporting is used for general government as well as for the three utilities.

The decrease in bulk of annual reports effected by adopting this procedure is shown by the two binders. The records in this illustration were furnished by the Burroughs Adding Machine Company, Detroit.

Fifth in a series of articles by Walter E. Seaholm. See also "Assessing, Collecting, and Accounting," page 109, October; "Adoption of an Accounts Payable Fund," page 109, November; "Centralized Payroll Equipment Writes Three Records in One Operation," page 92, December; and "Stores Control by Centralized Records," page 78, February.



More efficient records reduce the annual report to one-seventh of its former size

A Small Airport's Civic Responsibility

What has been done in Eugene, Ore., to make a small city airport effective

By DEANE SEEGER
City Manager
Eugene, Ore.

THE "old airport" at Eugene, Ore., had been regarded by some as a sort of white elephant, having been supplanted by the 900-acre Mahlon Sweet municipal field from which United Air Lines operates. But study undertaken by the Airport Commission because of the interest of air-minded residents convinced us that this little old airport represented a civic asset of real value and we decided to make the most of it. The Airport Commission itself had been the basic stone in the foundation of the city's aviation program. It had been created to set up the policies for administration of municipal airports and make recommendations to the City Council for carrying out these policies. The chairman of this commission is Elisha Large, former mayor. One of the members is Mahlon Sweet, "daddy" of aviation in Eugene, for whom the larger municipal airport was named.

Ordinance Taxes Fliers

A license and tax ordinance was the first step. The ordinance divides fliers into three groups—commercial, private, and club operators. Anyone who uses the airpark regularly for flight training, charter or sightseeing trips, sales demonstrations, or mechanical services is classed as a commercial operator and his license fee is $200 per year.

In addition to this fee each commercial operator is required to pay monthly an occupational tax equal to five percent of his gross business in the preceding thirty days. The itemized reports accompanying such payments are subject to audit by the city, and failure to report or misrepresentation of figures or gross earnings is cause for suspension or revocation of the license. Sworn statements on income are required.

Before the tax rate and these fees were established, conferences were held with commercial operators who raised no major objections. The airpark received its letter of authority from the Civil Aeronautics Administration on January 9, 1945, and so far there are four commercial operators at the field and more are expected to locate there soon. Two provide mechanical and flight services and two supply only the latter.

Private and Club Operators

A private operator is defined as one who owns or operates a plane regularly at the airpark for purely personal use. His license fee is five dollars per year.

There is one club using the airpark at present, the Chennault Flying Club. The annual club license fee is equivalent to three dollars per member per year.

In order to protect commercial operators, the ordinance provides that "The hiring out or rental of a plane jointly owned by club members shall make such group subject to payment of a commercial operator's license . . ." The same rule applies to individuals with planes at the airpark. A violation is punishable by a fine not to exceed $200 or by an equivalent jail term.

The ordinance also provides for establishment of rules and regulations on use of the airpark, and the airport manager is given authority to enforce such rules, issue warnings and to suspend or revoke licenses of violators. Licensees have the right to appeal to the Airport Commission regarding suspensions or revocations; and the latter body, acting in an advisory capacity, "shall examine into the facts of the case and shall submit to the common council any recommendations that it deems proper as to the revocation of license or permit. The council shall thereupon hold a hearing on five days notice to the offender. Action of the City Council in upholding such revocation or ordering restoration of license shall be conclusive and their action shall be final."

Aim to Be Self-Supporting

We have not yet reached our goal of making the airpark self-supporting but we have taken steps along that road. The city sells all gasoline dispensed at the airpark, and, when traffic warrants it, further revenue will be derived from leases for such concessions as a cafeteria and a proposed "aerotel" to provide accommodations for visiting fliers. Expansion of commercial operations to include more sales organizations is anticipated, with consequent larger income to the city. An intra-state airline is preparing to use the airpark as its local base. First monthly tax and license returns by commercial operators gave the city $1,268 in revenue and we believe this will grow.

Physical properties on the field are not now extensive, and there is much room for growth. Runways are graveled. There is a need for hangars and a good deal of the mechanical work has to be done on the line. The city is not in a position to finance hangars

This building houses the office of the Eugene Airpark. In it also is a well-equipped shop maintained by the Eugene Vocational School, and a classroom for aviation students

Harry Francis, assistant to the airpark manager, takes care of refueling planes at Eugene Airpark. He also takes care of the office work

immediately but we have worked out a plan whereby operators themselves can construct them according to a uniform design. Operators would pay the city as yearly space rental ten percent of the cost of such hangars, such payments to be credited to the operators on their occupational taxes, with the buildings to become property of the city after ten years. This plan has met with apparent approval and probably will result in construction of badly-needed hangars.

There has been some complaint about noise in the vicinity of the airpark from nearby residents. This has been receding, but at the same time it is something the city must consider. A great deal of the noise results from flight training in which students are repeatedly landing and taking off. In order to minimize this, consideration has been given to a plan for constructing landing strips in a less populated area where students could practice without giving rise to such complaints. On the other hand, flying may become so widespread that an entire airport may have to be designated for flight training. Who knows?

Street Planning Projects

A description and listing of some of the projects designed with FWA Bureau of Community Facilities assistance

IN ST. LOUIS, MO., five major street improvement projects involve the widening and improvement of several heavily traveled streets to relieve congestion and to provide expeditious movement. These include 13th Street, from Victor to Sidney Streets, with opening of 13th Street one block, involving the removal of several old type apartment houses; Cherokee Street, from Broadway to 18th Street, including widening to 60-foot width; Forest Park Boulevard from Grand Avenue to Market Street with contemplated underpass at Grand Avenue; Choteau Avenue, from Third to Thirty-ninth Streets, including widening to 62-foot width; and Morgan's Ford Road from Gravois Avenue to the city limits, widening to an 80-foot width. About two miles of this thoroughfare is now paved to a width of 20 feet.

In Pasadena, Texas, Houston Ship Channel in the industrial and manufacturing area plans paving, curbs, gutters, storm sewers and sidewalks estimated to cost $650,000.

In Hays, Kans., a $162,165 street improvement program is planned; most of the downtown pavement was constructed prior to 1928 and many streets are without adequate paving, curbs or gutters.

Anniston, Ala., is to spend $758,321 for paving, sidewalks, curbs and gutters for streets not now improved and to pave traffic arteries connecting such areas.

Santa Ana, Calif., construction and reconstruction program involves 29.44 miles of streets estimated to cost $615,286. Kirkland, Washington, with no pedestrian walks except in the business district, has a $547,000 street improvements program.

Parkersburg W. Va., had its last major street improvement program in 1930 and 1931, plans to spend $416,000 on grading, surfacing and draining about seven and a half miles of streets. Lowell, Mass., plans to spend $186,000 on sidewalk construction, including granite edge-stones, throughout the city.

Irvington, N. J., is to reconstruct streets now in need of repair, estimated cost $304,051; Farmington, N. M., will construct about five miles of sidewalks, surface about 11 miles of streets, provide curbs and gutters; estimated cost $185,800; Roswell, N. M., has plans to pave 216 blocks, provide curbs and gutters, to cost $461,000.

Alabama

City	Cost
Eufaula	$ 74,157
Anniston	758,321
Hobson City	15,600

Arizona

Williams	$290,944

California

Berkeley	$169,111
Redondo Beach	26,200
Los Gatos	40,000
Santa Ana	615,286

Georgia

Bowman	$ 42,000
Warm Springs	34,620
Bainbridge	142,000
Rossville	119,030

Illinois

Hutsonville	$ 23,190
Robinson	77,000
Palestine	20,980

Iowa

City	Cost
Spencer	$ 52,820

Kansas

Hays	$162,165
Junction City	88,000

Louisiana

Coushatta	$ 85,436
Bossier City	208,000
Thibodaux	270,000
Gueydan	135,120
Bunkie	39,573
Springhill	74,178
Winnfield	47,210
Independence	53,937
Columbia	74,427
Hammond	347,732
Leesville	326,549
Ville Platte	432,979
Vidalia	38,833
Eunice	165,000

Massachusetts

City	Cost
Lowell	$293,500

Michigan

Holland Twp.	$ 45,000

Mississippi

Pelahatchie	$ 11,500
Collins	136,358
Shelby	136,358
Ackerman	68,500

Missouri

St. Louis	$940,000
Bowling Green	61,500
Richmond Heights	279,740
Kennett	275,000

Nevada

Sparks	$125,138

New Jersey

Irvington	$304,051

New Mexico

Farmington	$185,800
Roswell	461,000

North Carolina

Roanoke Rapids	$154,823
Franklin	43,100

Ohio

Steubenville	$687,445
Portsmouth	30,387

Oklahoma

Ada	$106,000

Pennsylvania

Patterson Twp.	$ 89,000

Texas

Sweetwater	$184,750
Bay City	309,460
Orange	272,205
Pasadena	795,000
Robstown	54,000
West University	277,000
Alamo Heights	248,125
Brenham	222,000
Pelly	217,000
South Side Place	153,500
Odessa	108,120
Rocksprings	99,000
Carthage	59,329
Smithville	216,000
Munday	162,920

Washington

Kirkland	$547,000
Cathlamet	25,296

West Virginia

East Rainelle	$ 31,000
Parkersburg	416,000
Charleston	364,500

What Are the Legal Rights of Returning Veterans to Former Jobs?

Municipal officials urged to follow the policies set up in the federal act

By HAROLD J. ASHE

WHILE it is true that, subject to civil service rights, city officials have complete authority in the matter of reemployment of returning veterans, it would be well to exercise this authority justly. City employees' jobs are not protected by the Selective Service and Training Act, which provides for employees of private employers.

However, the Act states "If such position was in the employ of any state or political subdivision thereof, it is hereby declared to be the sense of the Congress that such persons should be restored to such position or to a position of like seniority, status and pay."

Present attitudes of the public and press indicate the wisdom of local governments in following closely the policies set up by the federal act in order to avoid criticism. Improvisation by local officials making rules as they go along can only lead to confusion, criticism, and discrimination. As a guide, the gist of the federal reemployment provisions are outlined herewith.

Who Is Eligible for Reemployment?

Any person, male or female who, subsequent to May 1, 1940, entered upon active military or naval service, including Army, Navy, Marine Corps, and Coast Guard. Also by separate statute members of the U. S. Merchant Marine. Veterans must show evidence of completion of satisfactory service.

Veteran Job Reinstatement Requirements

Veterans seeking reinstatement must make application to former employers within 90 days after their discharge and present discharge papers.

Employer's Obligation

Employers must reinstate applicants in their former jobs or jobs of like seniority, status, and pay, provided the applicants are qualified for the jobs and the employer's circumstances have not so changed as to make reemployment impossible or unreasonable. Exception is made where veterans held temporary positions.

The veteran is not required to meet higher standards than existed in the position at the time it was vacated by him, nor is he required to meet standards set up for others with no reemployment rights. If the job has been upgraded, then he is entitled to a job requiring skill comparable to and with equal seniority, status, and pay to that which he vacated.

Medical Examination

If the veteran's condition is such as to raise a reasonable doubt regarding ability to perform the duties, the employer may require a medical examination without expense to the veteran. The determination made upon such medical examination, however, is not binding upon the veteran.

No veteran may be denied his former position or one of like seniority, status, and pay, on the basis of disability except where one or other of the following situations exist:

(a) His disability makes performance of duty impossible or reduces his efficiency to a level below that normally expected of acceptable employees;

(b) His presence on the job would jeopardize the safety or health of himself or others.

Employer's Changed Circumstances

"Convenience" of an employer is not synonymous with "unreasonable" or "impossible." An example not accepted as unreasonable or impossible is the case where the non-veteran to be replaced is receiving less pay than the employer would be required to pay to a veteran. Neither the fact that women are employed in place of male veterans, nor promises of permanent employmen to those who filled the places vacated by veterans is an excuse for failure to reemploy veterans.

"Unreasonable" means more than inconvenient or undesirable to the employer. The veteran must be restored to his position even though he has been replaced by a substitute who has been able, either by greater efficiency or a more acceptable personality, to make it more desirable to retain the substitute instead of reemploying the veteran.

Conditions for Restoration

The only conditions for reinstatement that a veteran may be required to meet are those conditions which are specifically enumerated in the law. Union membership or other conditions not enumerated in the law may not be required as a condition to reinstatement.

Reemployment rights are not lost because "quit slips" or "resignations" were signed at time veterans entered the armed forces. Nor does a lapse of time between leaving employment and entering the armed forces defeat the veterans reemployment right, if the lapse was due to changing from civil to military life.

Application for Reemployment

The offer by an employer to reinstate a veteran within the 90-day period, but before the veteran applies, does not affect the veteran's right to apply at a later time within the 90-day period.

Seniority of Non-Veterans

Qualified veterans are entitled to reinstatement even though it necessitates discharge of a non-veteran with greater seniority.

Moreover, a veterans' seniority accumulates during the period served in the armed forces, just as though his civilian job had been uninterrupted. He is entitled to blanket increases of pay granted workers during his absence.

He may refuse a position other than his former one, even though pay is greater and it offers other advantages not previously enjoyed.

Temporary Positions

The only positions not covered by law are "temporary" positions. "Position other than temporary" means more than "permanent." It must be shown that employment he left to enter the armed forces was "temporary" and borderline cases should be resolved in his favor.

Persons Who Left the Same Job Assignment

The fact that several veterans left the same job assignment to enter the armed forces is not determinative whether replacements were holding temporary jobs. The character of the

employment relationship should govern rather than merely the particular assignment being carried out at the time of entry into military service.

Part-Time Employment

Part-time employment is not necessarily synonymous with temporary employment. Whether a position is temporary or not cannot be resolved on the basis of hours of work per day or per week. If part-time work is not short-term, but involves regular continuing service for an indefinite period, it is not temporary.

Probationary Workers

A veteran may have been a probationary worker and still have reemployment rights. A probationary worker is not to be considered a temporary worker when the term "probationary" is used only to indicate a period of time which must elapse before certain privileges become available, such as seniority, vacation, insurance benefits, automatic pay increase and promotions.

Apprentices—Trainees

Neither are the terms "apprentice" or "trainee" determinative whether the position is temporary or not. He may be an apprentice, a trainee, a helper, a journeyman, and still be either a temporary or other than temporary employee, depending upon terms and purposes of the employment relationship.

Hospitalization After Discharge

Where a veteran's condition at time of release from active military service requires hospitalization, the 90-day period for application for reemployment is held in abeyance until he is released from hospitalization, providing hospitalization does not exceed one year. If it exceeds one year, reemployment rights expire after 90 days following one year of hospitalization.

The hospital may be either government or private and the veteran may transfer from one to another, and hospitalization status is not terminated by short interruptions in hospitalization.

Capacity to Perform the Job

Because veterans find themselves in competition for jobs with persons who have been filling them during their absence, they may require a period of time to re-acquire skills. That is a reasonable and necessary incident to reemployment normally required for a person to become proficient. He is entitled to every practical opportunity to prove that he can perform the duties of the job.

A Voice from the People Who Live in Cities

FOR the last few years, the mayors of the larger Michigan cities have tried to impress upon the state government the need for increased revenue for municipalities. In order to be more effective, the mayors recently organized the Michigan State Conference of Mayors, and are now waging a campaign for prompt state legislation to put municipal finances on a sound basis. This open letter from the Mayor of Grand Rapids to the Governor of the State is one type of publicity currently used.

An Open Letter

To the Governor of the State from the Mayor of a Town

This is a voice on behalf of the majority of the people of Michigan who live in cities — a voice from those cities of Michigan which have gained for this state a reputation as one, if not the greatest, industrial commonwealth in all the world.

This voice speaks for those cities which produced more munitions of war than any other spot on earth — cities that earned for Michigan the title of "The Heart of the Arsenal of Democracy."

It is the voice of those cities in Michigan that furnished the bulk of the State's quota of the manpower and womanpower that used those tools of war.

It is the voice of those cities of this great industrial commonwealth that bought the bulk of the State's quota of bonds that financed the making of the tools of war—the same cities that provide your state government with the major portion of the wealth that is piling up in State coffers.

You, Mr. Governor, your administrative officers and your legislative leaders, should be proud of these cities and the contribution they make that places Michigan high in the commonwealths of our nation. But evidently you're not proud of these cities. You act toward them as though those people who live in them are enemy aliens.

You and your legislative leaders spurn them; treat them as beggars and slam the door in their faces. You mask this antipathy by attempting to hide behind the uniform of a returned soldier: the skirts of a mental defective or the gown of a college student.

You apparently ignore the fact that most of the problems of the people of the state are met where most of the people are — in these same cities.

It is to the cities that most of the veterans return.

If he is fortunate enough to find a home, he also finds inadequate fire protection for it.

If he finds a job, he finds his nerves frayed at day's end, seeking a way home through traffic snarls.

If he has children, they go to inadequately staffed schools, unsupervised playgrounds, and go and return from schools across hazardous and unwatched street intersections.

He pours more millions of tax money into your state treasury than you can judiciously spend, while he finds the simple services which his city should perform, starved for lack of funds.

He finds the place where he seeks to live, work and raise a family hedged by legislative restrictions that not only prohibit the raising of adequate funds but continuously assess new expenses on his community.

The State wants its streams unpolluted so it orders the community to build expensive and elaborate purification systems, but makes no hint as to how they shall be financed. It passes a law for scavenger property sale that invalidates the bonds that have been issued for special improvement taxes and forces the citizen taxpayer to redeem the bonds while the state acquires the property and sells it to the speculator for ten to twenty cents on the dollar.

The State regulates the hours and wages of some of those who perform municipal services but makes no mention of where their pay is to come from.

It takes millions from the motorist but spends the bulk of his contribution elsewhere than on the city streets he uses.

The great tax collectors for the State, the city merchants, find there is no place to park a car when his customer comes shopping.

Millions of damage to autos result from inadequate traffic control.

The physical plants of these cities, lacking maintenance long beyond the war years, threaten collapse, and the answer of your legislative leaders to all this, is the trite command that people in cities increase their own tax load. You, not they, fool no one by your cry that hospitals and institutions of higher learning need your surplus funds. You and your legislative leaders know all too well that millions have already been set aside for these needs and have not been and cannot be spent because of building conditions.

In contrast to your antagonistic and your Scrooge-like attitude toward the cities of your State, the federal government evinces a sympathetic and appreciative attitude toward those communities where the bulk of the people live, and rush to their aid in an emergency. Returning Veterans looking for homes, find your state government contemplating chiefly steel and concrete monuments to your administration, while the federal government appropriates 190 million to help cities help veterans find homes.

Are the cities of Michigan to be denied a fair share of the wealth they create and be allowed to degenerate into slum areas, fire hazards and traffic muddles, while the war-bombed cities of Europe rise Phoenix-like from their ashes into splendid, modern communities while our cities that went to their rescue, are forced to hang their heads like poor relation?

What finer ambition could a State government have than to build better cities? What greater contribution could a State make than to help provide adequate grade schools for its future citizens?

This voice from the cities comes to you, not as the voice of a beggar nor a medicant, but as the voice of a proud people who furnish the wealth you toy with. They have suffered long with an inadequate voice in your legislative halls. They have been patient, but in their own self defense and in the interest of the preservation of their own communities, they come to you demanding financial justice, not unmindful that they can, as last resort, turn to the power and strength that lie in these millions who choose to live in organized communities.

Must we go that far?

GEORGE W. WELSH

Mayor of Grand Rapids

Public Relations for Municipalities

Pictures like these—an inhabited shack in Lodi, Calif., at left, and a blighted area map of Los Angeles at right—are effective means of promoting the California Community Redevelopment Act.

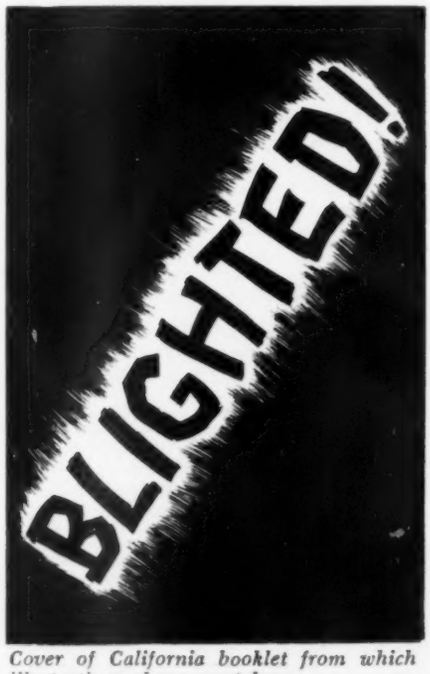
Effective Publicity Aids Redevelopment in California

THE CALIFORNIA State Reconstruction and Reemployment Commission has just released another in its series of pamphlets about postwar problems and opportunities. "Blighted!" is the title of this latest report, which is designed to acquaint city officials, taxpayers, businessmen, and the general public with the Community Redevelopment Act of 1945.

A very effective example of graphic presentation, the pamphlet does not mince words, but rebukes California's outstanding cities for the intolerable conditions of blight and decay within their boundaries. "You live in Sacramento, capital of the State? Take a walk down Capitol Avenue. . . . What do you see? Crowded hovels where people live. Miserable holes. . . ." And so on down the line. The cities thus singled out, the pamphlet states in a postscript, voluntarily made facts, figures, and photographs available to the Commission and are by no means the only offenders in the state. Having shown that the need for redevelopment of blighted areas is pressing, that the health and well-being of thousands of Californians is endangered and that even greater numbers will be affected if conditions are permitted to prevail or worsen, that land values are going down rapidly and that business opportunities in urban areas are dwindling, the pamphlet proceeds to expound the benefits which will accrue to all from the new redevelopment legislation.

The new law enables any city or county or group of cities or counties in California to require the sale to the public of land and buildings in any blighted area by means of the power of eminent domain. It further permits the city or county to clear the land of structures and to sell or lease it to any group of businessmen or private developers, provided they agree to rebuild the area for industrial or residential use in accordance with a general plan prepared in advance by the city or county authorities. The law safeguards the rights of present property owners, present tenants, and taxpayers.

In an attempt to mobilize public pressure behind the legislation, the last section of "Blighted!" is entitled "You can do it yourself," and drives the point right home to those concerned. The pamphlet maintains throughout that those concerned include all residents of urban areas in California, since all segments of the urban population are affected by slum conditions in one way or another. "You are a builder, a real estate broker, a banker?" If so, it is pointed out, there is a good investment in the rebuilding of "that choice downtown area which is now, unfortunately, crowded with fifth rate stores, tenth rate dwellings."



Cover of California booklet from which illustrations above are taken

The pamphlet appeals to the property owners, the veterans who are looking for homes, the ex-war workers who are looking for a job and who could find work if only a large-scale construction program were undertaken. It calls upon the slum dwellers themselves to make their protests heard. It urges suburban residents, retailers, manufacturers and all others who have a stake in a more prosperous community to add their support. The pamphlet places the prospect of fatter tax rolls, higher assessments and lower costs before local government officials.

Finally the Commission implores all interested citizens and groups to contact experts in city planning, construction, and finance who are available for consultation in each city.

Tax Sources for Municipalities

What's good for St. Petersburg is not necessarily good for St. Paul

By A. M. HILLHOUSE
in collaboration with
MURIEL MAGELSSEN
and other staff members of the
Municipal Finance Officers Assn.

CLOSE study of the municipal revenue problem leads to the conclusion that, in general, statements of "the problem of municipal revenues" have been over-simplified. What cities face is not a single, homogeneous problem; there are as many types of municipal revenue problems as there are kinds of cities. The problem is complex and it is dangerous to paint the picture with broad strokes.

We must conclude that despite the cry against the property tax, it is not an unsatisfactory source for large numbers of American municipalities. We must also conclude that some cities have a satisfactory system of grants-in-aid and of sharing in state-collected taxes; whereas the very opposite of this is true for cities in another state. Some cities have developed a satisfactory system of license taxes and taxation of utilities, but in no sense would these same revenue sources be satisfactory, or be recommended, for all other cities. Studies show that a few cities have attained a well-diversified tax program; whereas others are still relying largely on the property tax. We must even conclude that there are some cities for whose problems there is no single or simple solution. This grows out of their economic base and an unstable economic life.

The Municipal Revenue System Must Fit the Circumstances

The municipal revenue system must be tailored to the special character of the city. What is good for Peter is not necessarily good for Paul. And two cities, even in the same state, may be as different from each other as two quite different individuals. If then the revenue system must be tailor-made, what are the characteristics of cities which must be considered?

1. *The size of the cities is important.* Many of the small municipalities are not faced with burdensome municipal expenditures, such as unemployment relief. The property tax for them is wholly adequate. Furthermore, there are some taxes, such as income, sales, and some of the consumption taxes, which may be used satisfactorily by the large cities but not by the small.

2. *The geographical relationship of the municipality to other cities.* It is not an accident that the major cry against the property tax as a major source of revenue comes from the central cities whose geographical relationship to other cities has unfortunate results from a municipal revenue standpoint. They are suffering from a revenue disease which might be termed "peripheral suburbanitis." The automobile and other means of rapid transportation are destroying property values in the central cities, but not to be forgotten is the opposite effect on property values in the suburban areas. The movement of home owners and industries from central cities into suburban communities has municipal revenue effects unfortunate for the one, but fortunate for the other.

3. *The stage in the growth of the city* also is determinative of the type of revenue system it should have. There are some cities which are on the boom. They are young cities. They are growing and for a decade or more will continue to enjoy rising assessed valuations, such as a great host of cities knew prior to the Great Depression. This type of city is not worried about the property tax not being a satisfactory revenue source. In contrast many cities in the old areas of the United States are losing population. They might be termed "decadent cities." This group is faced with declining assessed valuations and must devise a municipal revenue system to offset the serious decline of its property tax.

The tailor-made revenue approach suggests that a detailed study of the population growth, or decline, of sample cities would throw real light upon what is their true municipal revenue problem.

4. *The standard of municipal services demanded* by citizens in a given community will also determine the type of municipal revenue system. Already commented upon is the ability of some cities to keep their property tax low because the level of municipal expenditures is also low. However, when the standard of municipal services rises in these cities, the whole character of their municipal revenue problem will change.

5. *The character of the wealth* in a given community will also determine the kind of municipal revenue system. There are some cities where, because of age and character of population, intangible property is a major form of wealth. In others, real estate is the most important form of wealth. Some cities have a larger percentage of home ownership than others; some communities have a great many more automobiles per capita than others. All these differences in character of wealth influence the kind of municipal revenues which should be adopted.

6. Cities also vary according to the *general character of their economic life.* Some cities are primarily resort cities, others governmental centers, others bedroom cities, et cetera.

7. Finally, cities differ as to the *states in which they are located.* This is important from a municipal revenue standpoint because some state governments are strong and aggressive; others are not. States also differ as to the kind of tax systems which they have and the extent to which they share their revenues with the local governments.

Classification by Stage of Growth

An individual city, of course, may readily determine what are its characteristics according to the above categories. For cities as a group, this information is more difficult to secure, but some of the groundwork has already been laid. No recent studies are available classifying cities according to the stage of their growth, nor as to the character of their wealth. A classification of cities according to the standard of municipal services can be made from per capita revenue and expenditure figures.*

The most important basis for tailor-making the revenue system is the general character of economic life of a community. The accompanying chart shows the main types of cities so classi-

* The type of over-all tax structure can be determined from *Tax Systems* and from the Bureau of the Census reports. The recent study, "Economic Classification of Cities," *Municipal Year Book* 1945, pp. 30-38, classifies cities according to their geographical relationship to other cities. The general economic character of a city can be readily ascertained from two studies: Chauncy D. Harris, "A Functional Classification of Cities in the United States," *Geographical Review*, Vol. 33, 1943, pp. 86-99, and from the *Municipal Year Book* 1945 article on the "Economic Classification of Cities." The former article is based on the 1930 census; the latter on the 1940 census. In addition, the Municipal Service Department of Dun and Bradstreet has made an independent classification of all cities over 10,000 in population and the results of this appear in credit reports upon individual cities.

fied and the revenue sources which are especially adaptable to each type city.

Is Simplicity Desirable?

This notion of tailor-made revenue systems collides headlong with the natural predilection of rational minds for simplicity. This predilection is evidenced by the many attempts to devise and promulgate model systems of taxation. The rational mind dislikes the complex, and the thought of a highly diversified municipal revenue picture, difficult to encompass on a nation-wide scale, has not been an attractive one. Perhaps better reporting, including a wider coverage of smaller municipalities, would help to remove this opposition. Secondly, there is a strong feeling among many tax experts that the state and federal systems are too complex. There is the accompanying feeling that this complexity should not be compounded by widely diversified municipal revenue structures. The results have been opposition to use of the same tax by several levels (double and treble taxation). This opposition has at least been consistent. The complexity in both the state and federal systems has been opposed, but to little avail.

From the cities' viewpoint, the question, however, is legitimate—Why is there an insistence on a simple pattern for cities when the states and the federal government have complex systems? Tailor-made municipal revenue structures could be right even though they make the total picture more complex, and even though they defy the standard pattern of a model system. The very diversity in the picture may be a healthy sign of a strong and vigorous local democracy.

The tailor-made approach may result in diversified revenue sources for some cities; for others, not. In general a diversified revenue structure should bring several advantages to the individual city:

1. Broadly speaking, a more diversified revenue system should be more equitable because the local government has a better chance to reach varied economic elements in a community.

2. From the standpoint of safety, it would seem wise for a city not to put all of its revenue eggs in one basket. Witness the serious difficulties of cities in several states during the early part of the Great Depression because of too heavy a reliance on the property tax. When the real estate interests succeeded in establishing drastic tax limitations, some cities were up against serious deficits. Cities which are now getting away from the property tax, but are placing too much reliance on shares in state-collected taxes, in grants-in-aid, or upon one particular source, are running the same risk.

3. Diversification should also be an important step in adjusting municipal revenues to cyclical swings, that is, marked changes in general business conditions. This has a two-fold aspect. Diversification should give more stability of revenues as a whole, some taxes falling off rapidly with a business depression, but the total decline in revenues being cushioned by other revenue sources holding their own. The other aspect is one of tactics. Looking ahead to depression periods, it would seem wise for a city to have on its books some taxes the rates of which could be readily increased to offset other revenues which are declining. Having used these taxes, but at lower rates, less opposition would arise. The very fact that the tax is not a new source would arouse less opposition.

Types of Cities and Revenue Sources Especially Adaptable

Key: Each type of city is identified by the corresponding number given here:

1. Resort city
2. Institutional city (state capital, educational center, or seat government)
3. Suburban city-residential
4. Agricultural-trading center
5. Manufacturing-stable consumption goods
6. Manufacturing-unstable consumption goods
7. Heavy-industry city
8. Extractive-industry city
9. War plant centers
10. Diversified-economic-background city

Source of Revenue	Type of City
Amusement taxes: admissions tax, licenses for mechanical amusement devices	1, 2, 9
Admissions tax	4
Amusement licenses	8
Beer and Liquor licenses	7, 9
Beverage consumption (sales) tax	1, 9
Business license based on volume of production	7
Business and occupation license (gross receipts basis)	1
Business and occupational license	3
Business and occupation license tax (gross receipts basis)	10
Business and occupation tax	8
Building permits	9
Cigarette and tobacco tax	1
Earned income (wage, payroll) tax	6, 9
Earnings from city-owned utilities (charge consumer higher rates)	1
Earnings from city-owned utilities	2, 5, 6, 7, 10
Earnings of health department	9
Federal aid	9
Garbage and refuse collection service charge	7, 8
Gross production tax	8
Gross receipts business licenses	5, 6, 9
Gross receipts franchise tax on bus companies	2, 3
Gross receipts merchants' license	2
Gross receipts merchants' license tax	4
Gross receipts public utility tax	1, 5, 8, 9, 10
Licenses temporary vendors	9
Motor vehicle licenses	2
Motor vehicle license tax	3
Municipally owned parking lot fees	2, 4
Occupancy tax on tenents of non-residential buildings	4
Parking meters	1, 2, 3, 4, 7, 8, 9, 10
Payments of housing in lieu of taxes	9
Property taxes	3, 5, 7, 8, 10
Recreation fees	1, 2, 3, 9
Retail sales taxes	9
Selected sales tax on hotel meals, services, amusements	1
Sewer rentals	7, 8
State aid and city shares in state-collected taxes	6, 7
Street lighting assessments for current operating purposes	3
Tax equivalents upon city owned utilities (higher consumer rates)	3
Tenants' tax	2, 9
Tolls on vehicular bridges	4
Trailer occupancy tax	9
Vehicle inspection fees	3

From Chapter XII "Some Special Considerations," pages 203-208, *Where Cities Get Their Money*, by A. M. Hillhouse and Muriel Magelssen, Municipal Finance Officers Association, Chicago, Ill. See also page 145 of this issue.

A Debate on War Memorials

A DEBATE on "What Kind of War Memorial?" by the late William Mather Lewis, former president of Lafayette College, and James Earle Fraser, the sculptor, is presented in the February issue of *The Rotarian*.

Mr. Fraser urges that we select monuments "of beauty fashioned in enduring materials." We cannot, he suggests, do honor to the war dead and to those who have returned in one monument. "There should be a difference in our manner of commemorating our dead and our veterans which reflects the very difference between life and death itself," he says. Stadiums, libraries, and the like he does not consider appropriate for honoring the dead, and he stresses instead the spiritual quality of monuments like the Arc de Triomphe in Paris and the Lincoln memorial in Washington, D. C.

Mr. Lewis' article, on the other hand, while conceding the esthetic influence of monuments which have beauty without utility, contends that "even more important influences will be needed in the post-war world." It is a plea "*for* utility, not *against* beauty." Our monuments must be agencies for future peace, the article states, and should, therefore, be projects which lead to the development of the best type of community life.

Readers who are giving serious thought to this problem of how best to commemorate the war dead will also find helpful the new brochure "Commemoration Through Community Service," recently published by The American City Magazine Corporation. (See* The American City, *February 1946, pages 88 and 89.)

New Fire Apparatus in a Village Where Few Fires Break Out

One hundred and twenty volunteer firemen have carried on a vigorous fire prevention program

By ROBERT DRAYTON
Fire Chief
Amityville, N. Y.

THE INSTALLATION at Fire Headquarters of a 750-gallon Mack pumping engine on December 13, 1945 was the first step in a modernization program that will see the replacement of practically all of our apparatus. We expect to order a similar engine in April and a third next year.

Still and General Alarms

Yet we have few fires. A grass or brush fire we call a still alarm, and there have been only four since last November 2—the date of our last building fire. A house on fire is a "general alarm" and we go to it with all the apparatus of our three fire stations. The general alarm prior to the last was on July 23, 1945. The principal reason for this record is probably the vigorous fire prevention program conducted by the 120 volunteer firemen of the department.

Until four years ago the fire insurance rate on houses was 50 cents per hundred dollars; since then it has been 35 cents. During the last twenty-five years we have won more than one hundred trophies.

The village of Amityville, Long Island, N. Y., is about three miles long and a mile wide. The headquarters is centrally located in the municipal building. It houses a Mack city service truck bought seven and one-half years ago. The truck is equipped with a Sterling sirenlight, an Atlas life net, MSA all-purpose gas masks, and an Emerson resuscitator which is also used by the police department quartered in another part of the same building.

Besides this ladder truck and the new pumper, the headquarters also houses a 4-year-old, 400-gallon booster truck and a floodlight truck. The booster truck goes to all fires and usually proceeds to the still alarms alone. It carries ten Indian fire pumps and brooms and can take care of grass and brush fires; fifteen pumps are generally carried on other trucks. The two Crouse-Hinds floods and a spotlight are served by a 1,250-watt Homelite generator.

Our quarters include a recreation room with a pool table, a kitchen, and an assembly hall for talks and annual dinners which is used by the local justice and the village clerk.

New Pumper for Each Fire House

A fire house on Bennett lane at the south end of the village is for Hose Company No. 1. It is equipped with one 500-gallon pumper which will be replaced this summer by a 750-gallon pumper similar to the one at headquarters.

The third fire house is at Mill Street in the north portion of the village. It houses a 600-gallon pumping engine which, like No. 1's, is about twenty-five years old and will probably be replaced next year. Finally there is a hose wagon twenty years old.

Fire Department Wells Supplement City Water

Nine years ago the department drove three 8-inch hydrant-type wells at strategic points in the village to supplement the water supply furnished by the South Bay Consolidated Water Co. The wells are about 45 feet deep. They are tested from time to time; once a tin can was sucked into the strainer of the pump, which only proves that wells should be kept in order.

If the department is standardizing on Mack fire apparatus it is because of the excellent service we are accorded. A telephone call brings a service man in two to twenty-four hours.

The volunteers are called by a Gamewell air whistle at headquarters and two Sterling and one Federal sirens strategically located. We have to depend entirely on the telephone because we have no other fire alarm system. The police department, located in the same building, receives the telephone call and sounds the alarm and records it in a book. Our two police cars are radio equipped and the desk dispatches the nearest one to any fire.

Amityville's Mayor Charles R. Duryea, Jr., in white, and Chief Drayton, in blue, making an inspection. At right, the Chief is at the wheel of his latest pumping engine

Evergreen Park, Ill., Eliminates Excessive Sewer Infiltration

By ARTHUR H. LEWIS, JR.
Office Engineer
Consoer, Townsend & Associates
Consulting Engineers
Chicago, Ill.

Unusual application of quick-setting cement makes it possible to rehabilitate a six-year-old sewer line

THE village of Evergreen Park, Ill., was recently faced with the necessity of repairing a leaky 42-inch reinforced concrete pipe sanitary sewer. Excessive infiltration of sand and water through the joints was interfering with the operation of a lift station at the lower end of the sewer and was threatening to undermine it. It was realized that such undermining would in time cause the collapse of the sewer or complete misalignment of the pipe units.

The sewer had been constructed under difficult conditions by WPA forces six years before. The invert of the sewer was approximately nineteen feet below the ground surface, and was laid in a supersaturated silty sand which did not lend itself to wellpointing. It is suspected that the original cement mortar joints for the tongue-and-groove pipe were made under water.

Sewer Dewatered for Inspection

The sewer was dewatered for a distance of 1,220 feet in November 1943 for purposes of inspection. Several months of dry weather preceded this inspection, and the ground water was found to be about ten inches below the top of the sewer. The infiltration in the 1,200-foot length of sewer was found to be about 250 gpm, equivalent to more than 35,000 gallons per day per mile per diameter inch.

Inspection revealed that in nearly every joint in the 1,220-foot section the joint mortar in the lower half of the joint was gone, and in the upper half was cracked and loose. Sand and water were entering the sewer in small fountains. A few joints showed evidence of vertical misalignment, with a considerably larger opening in the bottom than in the top. Others were so far open that a cold chisel could be passed between the spigot and socket.

The sewer had a depth of sand of from eight to eighteen inches in the invert, and the remainder of the perimeter was coated with a layer of partially digested sludge two inches thick. This had been deposited during the previous six months when the lift station had been inoperative most of the time.

There was little or no chance of raising sufficient funds to construct a new parallel sewer. It was predicted that exterior repairs to the sewer, because of the nature of the ground and depth of sewer, might equal in cost the construction of a new sewer. The possibility of placing a metal liner within the sewer was considered, but this method was not adopted because of cost considerations and the necessary reduction in cross sectional area. The fact that the sewer was in good structural condition, and that the horizontal and vertical alignment was fair led to the decision to attempt repair of the joints from the inside of the sewer.

A cost-plus-fixed-fee contract was let, inasmuch as a village of this size has only one or two full time maintenance employees. The reimbursable part of the contract included only the actual net cost of making the joint repairs. All other costs, such as pumping, cleaning, lighting, overhead, and profit were lumped into the fixed fee.

The sewer was dewatered by means of a dam placed in a manhole upstream of the operations. The location of the sewer was remote from habitation, so that the pumps could be discharged to an open ditch constructed for the purpose which by-passed the section being repaired and re-entered the sewer downstream. Auxiliary pumps were provided at intermediate manholes to remove infiltration, and water pockets were swept away from the joints undergoing repair with brooms. The sewer was kept dewatered for ten hours each day, and the normal flow was allowed to pass over the dam at the close of each working day.

Repair Routine

After considerable experimentation a satisfactory repair routine was adopted. In joints where no sand or water under pressure was entering the following routine was adopted:

1. All the old joint material was raked out, and in some cases portions of the pipe chipped away to provide a key.

2. Joint faces were cleaned with muriatic acid.

3. Upper three-quarters of pipe joint were sealed with a mortar composed of 1 part sand, 2 parts Portland Cement, 1 part Metalox, and a 10% solution of Anti-Hydro cement in water.

4. The bottom quarter was sealed with a mixture of 1 part Metalox, 2 parts of Portland Cement, with Anti-Hydro being used instead of water.

A different mixture was required for joints that were under an appreciable head. Where conditions were at their worst, small amounts of Portland Cement and Anti-Hydro were mixed and immediately clapped to the joint. This mixture set up within a few seconds and made a waterproof and sand-proof joint. In several joints lead wool was caulked in to help stop the flow of sand prior to placing the mortar.

When completed, the repaired joints exhibited no infiltration of sand or water, despite torrential rains which had stopped the repair work several times, and which raised the ground water several feet. The mortar in the completed joints was firm enough to resist a moderate hammer blow without chipping. The tightness of the joints was well illustrated by the presence of minute streams of water coming through pin holes in the wall of the pipe.

Cost Data

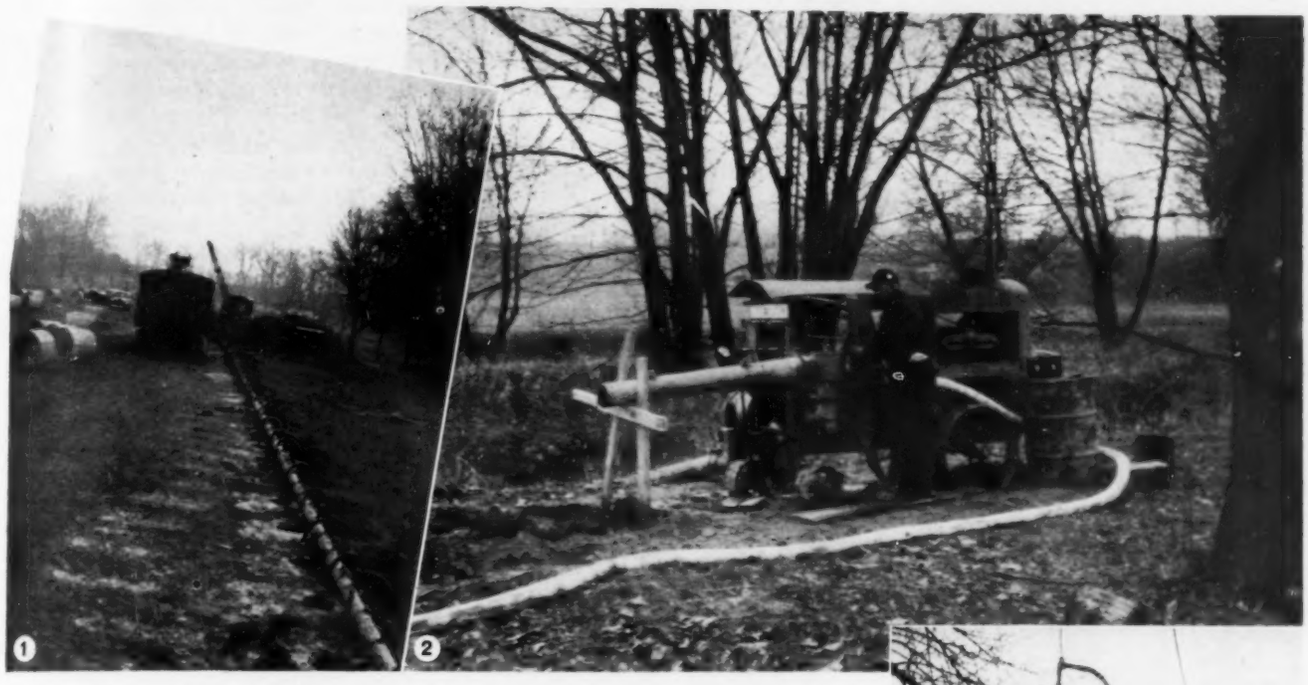
The cost per foot of the complete operation for the 1,220-foot section was:

Cleaning	$1.595
Dewatering, Lighting, Supervision	
Overhead and Profit	2.350
Repairs (labor and material only)	3.840
Engineering and Inspection	0.410
Total Cost Per Lineal Foot	$8.195

After experimentation, three experienced sewer bricklayers, each with a tender, were employed, together with one or two laborers, and an engineer to operate pumps and lighting system. Wages and hours were those prevailing in Cook County on January 1, 1944.

The contractor was Floyd Boddy, now the Boddy-McKnight Co. of Downers Grove, Ill. Preparation of plans and specifications, fixed fee proposal and contract forms, and engineering supervision were furnished by Consoer, Townsend & Associates, Consulting Engineers, Chicago 6, Ill.

Dearborn, Mich., Extends a Trunk Sewer



1. *This sewer extension that Dearborn, Mich., is building requires at this location a set of Moretrench wellpoints to dewater the ditch.* 2. *Wellpoints require a husky pump; on this job the contractor is using a big Moretrench portable unit.*

3. *This crew can jet a wellpoint into place in about 30 seconds. City Engineer Fred Storrer stands in the background with the Inspector on the job.*

4. *Engineer Storrer uses brick manholes exclusively because they are easier to fit into the finished surface.*

5. *A pull-shovel digs the trench to receive the 30-inch reinforced concrete trunk sewer.*

Bismarck Disciplines Its Water Supply

From water with pea-soup characteristics that produced dysentery and typhoid, to a water that is pure, clear, palatable, and soft—this is waterworks history of this city during the last quarter of a century

By WILLIAM YEGEN
Superintendent, Filtration Plant
Bismarck, N. D.

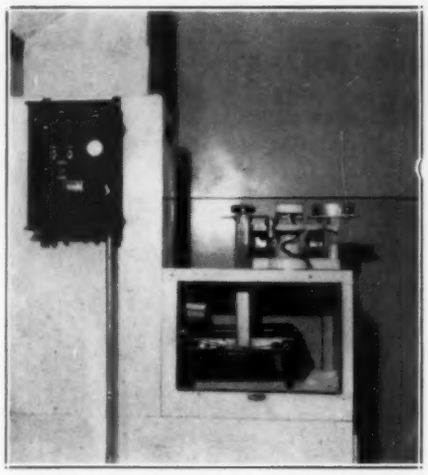
THE history of the modern Bismarck water plant and water system began with the acquisition of the privately owned water system in 1923. Then as now, the Bismarck water supply was obtained from the Missouri River and the water being supplied consumers in 1923 was very questionable in purity and most distasteful in appearence. The turbidity of the water was a minimum of about 10 ppm and at times the water had the consistency and color of "pea soup." Dysentery was prevalent and typhoid fever broke out periodically.

The Missouri River water carries turbidities as high as 31,000 ppm, which is maximum recorded at Bismarck on June 21, 1937. During that month 8,700 ppm was the average turbidity. We frequently have turbidities of 15,000 ppm. The years preceding the droughts of 1932 and 1936 were the years when the mud load in the river was the most severe. The last five years have been wet years in this area and the maximum turbidity very seldom reaches more than 10,000 ppm.

In the summer the raw water is relatively soft, about 125 ppm total hardness; the winter maximum is 500 ppm. Fortunately in the winter time the raw water is relatively clear. In the early spring we have a very soft, turbid, colored water to treat. With the exception of times when the turbidity of the water is highly colloidal this is the hardest water to treat because there are insufficient minerals in the water for proper coagulation of the color. The color at times will be as high as 380 ppm.

Water Through the Plant

The water flows into our intake well through two 14-inch cast iron pipes. In the well it passes through a Link-Belt traveling screen with ¾-inch mesh copper screens. The two 1,650-gpm Midwest pumps driven by General Electric motors lift the water 60 feet into a grit chamber where the heavy sand settles out. The water passes from this chamber when it is turbid to a presedimentation basin with 2½ hours retention. This basin is circular



The Syntron Gravemetric feeder used for feeding soda ash, alum, and carbon

and was made by the Dorr Co. The basin has proved itself after years of service to be able to effect about 90% removal in high turbidities. When we have coloids in the water they are very hard to treat and we sweeten the water with a small dose of lime. This is very effective in dropping colloidal substances in the presedimentation basin. In the winter when the raw water is hard but clear we flocculate the water before it enters this basis and use this basin for removing our softening sludge. The water passes from the clarifier to a Dorr flocculator where lime, soda ash, carbon, and alum are added. The carbon, soda ash, and alum are fed by gravemetric Syntron-feeders. The lime is fed by an International gravemetric feeder ahead of International slaker. Gravemetric feeders have proved very successful at our plant.

From the flocculator the water passes to two coagulation basins with 4 hours retention. These are rectangular basins with around-the-end baffles with a stilling weir on one end and a skimming wier on the other. The water passes through a concrete flume from this basin to the filters and in the flume we add ammonia and chlorine for sterilization, using Wallace and Tiernan equipment. We have two chlorinators with an assortment of meter tubes, so we can get any range of treatment we require. There is one chlorinator for standby service.

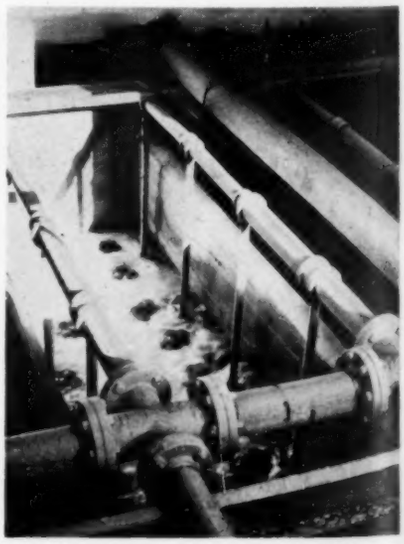
CO_2 is added just after the addition of ammonia and chlorine. A mash compressor is used for pumping the carbon dioxide gas. We use natural gas for fuel. It is so pure it is not necessary to scrub our CO_2 gas. Arrangement is made to cool the CO_2 gas just before it is compressed.

After the recarbonization the water passes to the filters. Three units use Simplex control equipment, and three units have International equipment. These are standard units of the rapid sand type and have a total capacity of 4,500,000 gpd. The water passes through these filters to a clear well and is pumped from there to a distribution system. Two 1,500 gpm and one 2,000 gpm Midwest pumps connected directly to General Electric motors pump the water into the distribution system. We have three Sterling gas engines directly connected to our pumps with a sliding coupling for emergency power and a 200 hp McIntosh and Seymour Diesel engine to generate emergency electrical power. We normally buy electricity for 1.5c per kw. from the local utility.

We have a 4,000 gpm wash water pump for washing our filters made by the Fairbanks, Morse Co. To control the wash water under 70 pounds pressure from our reservoirs to the wash well we use a float controlled Clayton valve.

During 1945 we pumped 527,669,000 gals. of water. Our daily average was 1,405,000 gals. and the maximum was 3,000,000 gals. The average hardness of the raw water was 220 ppm and the average hardness of the finished water 85 ppm.

We have a complete chemical and bacteriological laboratory. Turbidity, calcium hardness, total hardness, car-



Showing the filter surface wash in operation. This is of the Bayliss type

bonate and bicarbonte alkalinity, PH., and free CO_2 are run daily on the raw and tap water. Flash and total chlorine residual tests are made at least once a shift on the finished water. A bacteriological analysis is made on the tap water daily and the entire process is checked for efficiency at least once a week. These tests include raw, settled, filtered, and finished water. Five points on the distribution systems are tested weekly.

After purchasing the property the city constructed a modern filtration plant of 2,250,000 gallons per day capacity. This plant was placed in operation on June 20, 1924 and was constructed so as to permit the softening of the water in the future. As recommended by the consulting engineers, the original process consisted of pumping the water from the river with low-lift pumps to a grit chamber; retention in the grit chamber for one hour to settle out the heavy grit; the addition of lime and alum in the mixing chamber, which was equipped with over-and-under baffles, for a period of one hour's retention; eight hours' retention in the settling basins; filtration and chlorination; and finally pumping directly into the city's distribution system by means of high-lift pumps. This method of treatment proved very successful and provided the consumer with a clear, pure water. During the winter months the water was very hard and during the summer it was moderately hard.

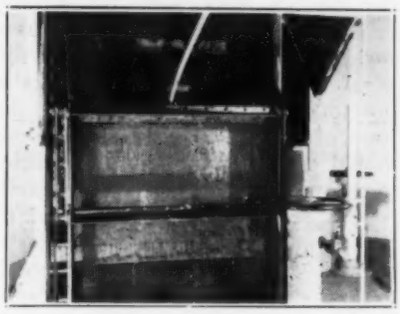
Chemicals Used

As a result of experiments made in 1929 it was found that the use of more lime and less alum produced a water of the same purity without any increase in cost. The new method provided a softer water and we obtained from 50 to 150 ppm softening without additional cost. Subsequently the mixing chambers were rebuilt and the baffles changed to conform with the new process.

In 1934 ammoniation was added to our process. At that time a .5 ppm chlorine residual was set as our plant effluent minimum, and this minimum has been retained ever since. We carry 1. ppm residual very frequently with an average of about .75 ppm.

In seeking the relationship between free ammonia, nitrates, and nitrites contained in the raw water and the resulting tastes and odors of the treated water, it was discovered in 1936 that there was a distinct relationship in our raw water between the PH and the taste and odors that could be expected in the finished product. It was further established in 1936 that if the raw water has a PH of 8.4 or greater, algae taste will be prevalent; whereas if the PH goes down to 7.9 or lower, tastes attributable to the decomposition of organic matter will be prevalent. The zone between a PH of 8.4 and 7.9 is the non-taste-producing zone. Since 1936 we have not experienced any off taste in the non-taste-producing zone.

In 1936 another advance was made by adding a flocculator to take the place of the over-and-under baffles mix and utilizing a clarifier for removing



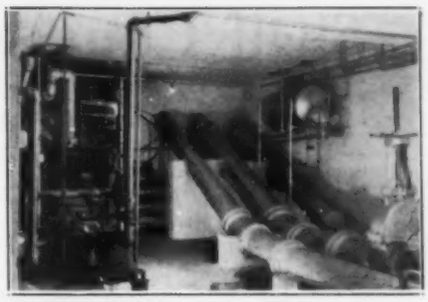
This is the Link-Belt traveling screen

suspended matter from the raw water before treatment. During the first year of its use this process resulted in an overall saving of $3,000 in chemicals.

In 1940 cementation of the filter sands in our plant caused us to seek a more stable water. After breaking up the filter sands and washing them through a sand jet, we decided to try giving our water the phosphate treatment rather than replace all our sand. This method worked very well in the summer months but during the winter, when our raw water is harder, we experienced a seige of extreme scaling in hot water tanks. Magnesium silicate was being precipitated so rapidly that one hot water tank was removed from service after three days' service. After eleven months of operation the phosphate treatment process was discontinued.

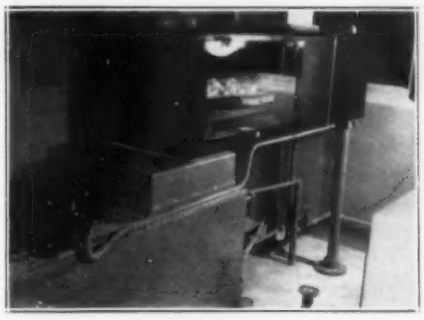
During 1940 the plant was operating close to the rated capacity and an expansion and improvement was deemed necessary. This program was completed in 1941 and resulted in doubling the filter capacity and the addition of the following:

Surface filter wash
Gravemetric feed machines
A hot lime slaker
Dust removal equipment in the hopper filling room
A carbon feeder
A soda ash feeder for complete softening
Recarbonization for stabilization
A traveling screen in our intake well



Here is the recarbonization boiler in the pipe gallery

With this new equipment in operation, total softening was contemplated and it was decided to furnish an average water of 85 ppm to our consumers. Stabilization seemed quite a problem due to the adverse results attained with phosphates. It was decided to go slowly and feel our way as we went. It was found that, by the use of lime, soda ash, and alum, a water with a high magnesium content could be produced. Knowing the properties of magnesium in the water, it was decided to carry on with this type of water. After about a year a close check was made to see what results were being obtained. From all indications scale formations in hot water tanks had been held to a minimum. After two years of operation it was found that scale formation in hot water tanks had disappeared and that hot water was being produced at temperatures around 180°F. This all was very encouraging, especially since no red water troubles were developing. Experiments were made with magnesium sulphate and magnesium bicarbonates and it was found that they could hold as much as 80 ppm of calcium carbonate in solution.



This International Gravemetric feeder is equipped with a slaker for feeding hot lime

We have worked out in our plant the following formula:

If the magnesium hardness is equal to or greater than calcium hardness, if the PH of the water is not less than 8.6 *or more than* 9.2 *the water is stable.*

After this formula had been used

(Continued on page 137)

Shall Counties Store Old Town Records?

By HERMAN F. ROBINTON
Supervisor of Public Records
New York State Education Dept.

IN THE NEXT five years the towns, villages, cities, and counties—all of the 1,604 subdivisions of local government in New York State—will spend an average of $1,000 each for additional records equipment and for the construction of records storage vaults, limited expedients at best, in order to attempt to accommodate the ever increasing accumulations of valuable local public records which must be preserved. On the other hand, the inroads of fire, flood, damage, careless destruction, and other losses resulting from neglect of our valuable local records will continue to take their annual toll. A large part of our older records have already disappeared, our governmental subdivisions are and will be spending more money for records equipment—and we are not getting anywhere nearer to the solution of the problem: the proper care and preservation of our valuable non-current records.

Whose Responsibility?

Should the town or village clerk, or even the county and city officials be expected to know the complexities of the many laws as well as the functional and organizational problems involved in records preservation? The average town or village clerk already has the privacy of his home invaded by a massive safe and he is scared lest an additional safe leave him and the safes sitting in the cellar under the debris of his house, for the floors, he fears, would not be able to stand the dead weight of an additional three-quarters of a ton. Should a town of two of three thousand inhabitants be forced to make the outlay for a town hall when the town meetings are only attended by the officers? Are the town highway garage vault and the village fire-house safe, both inaccessible, the best places for attempting to store valuable records? Has there ever been constructed a satisfactory basement or outside vault completely free of dampness?

True, an approved good safe for current records is a protective necessity. A well constructed approved vault (it should not be in a basement) will be needed for unusual accumulations of current records in larger local governmental subdivisions. But while the campaign for these marginally useful equipment necessities for the protection and care of current records must go forward, there remains still the problem of greater accumulations of valuable non-current records which cannot be accommodated in the good safe of the clerk, or the well constructed vault of the town. These important records must be reckoned with because there is hardly a town or community in this state that has not passed the century mark with the healthy promise that a good many more centuries lie ahead! The periodic disposal of useless records will minimize the total of yearly additions to the store of records to be preserved and should be resorted to by all agencies of government. But here expert knowledge is required and a great deal of time is needed to sort and classify the records carefully prior to disposal. What is desired is a real working solution to this problem of accumulation and not postponing the issue any longer, allowing the criminal loss and wanton destruction to effect remedies.

Perhaps were we to act now, we could gainfully divert some of the stored up money for the purchase of additional records equipment. The proper keeping of the records helps protect the rights and interests of the citizens and of their communities.

A County Records Depository

A solution of this problem is the establishment of county records depositories with trained local records experts and competent staffs in charge. The county clerk as chief administrative officer of the county should rightly be afforded the responsibility of this county archival agency. All non-current records of the towns, villages, and smaller cities, *may* be transferred to the county depository where they will be carefully classified and filed so that they are accessible for use by the town officers. Detailed inventories of all transferred records will be prepared and copies placed in the hands of all local officers, assuring a greater use of the old valuable records than now. As a matter of fact, the older records are usually wanted when the transactions or business involved takes place in the county seat. The records could be temporarily returned to the town if needed, or microfilmed and copies distributed to the agencies for convenient and ready reference.

The main advantage is that the town clerk could simply pack his periodic accumulation of records and ship them off to the County Depository. The services of the county records expert will be always available and within easy reach for frequent consultation anywhere in the county. With the county records depository, the present approved safe, or vault, will accommodate all current records without purchasing additional equipment.

From a recent issue of *Town Clerks Topics*, New York State.

Tax Work in Springfield Simplified by Addressing Machine

ONE of the biggest clerical jobs in every city and town is the annual preparation of valuation lists, commitment lists and tax bills for poll, personal property, and real property taxes. Although this is a job made to order for mechanical addressing equipment, there are few cities and towns in Massachusetts that are employing their equipment for these purposes, says The Massachusetts Federation of Taxpayers Association, Inc.

The point is, that a certain amount of information, the name, address, and property description must be set up on the valuation list, reproduced on the commitment list, and reproduced again in one or more places on the tax bill. Further, the changes in this information from year to year constitute but a small percentage of the total in most years. There can be no excuse for writing this information either in longhand or on a typewriter when suitable mechanical equipment is available in the city or town.

Real Property Lists and Bills

One of the most completely mechanical procedures in the State of Massachusetts for preparation of real property lists and tax bills is that in the city of Springfield. The Springfield procedure for reproduction of names, addresses, and property descriptions could be utilized with only minor variations by almost every city and town in the state now owning addressing equipment.

On the valuation and commitment lists, only the first column is printed mechanically. This much can be done in most towns. The data on valuation and the amount of tax are entered in Springfield with a bookkeeping machine. The same material printed on the valuation list is printed at the same time on the tax bills.

Making Incineration Mechanically Perfect

Englewood, N. J., wanted an incinerator with as many mechanical improvements as possible and got one seven years ago of a design unique in the municipal field. The operating data are worth studying

THE motivating factor that prodded Englewood into building an incinerator, explains City Engineer G. Russell Hartley, was the construction of the George Washington Bridge back in 1928. Englewood, an attractive suburban community of 22,000, had been planning to improve its method of garbage and refuse disposal for some time, but for some reason action had always been postponed. When the George Washington Bridge was built, the city discovered that its unsightly dumping grounds would be exposed to the critical eyes and noses of far too many observers. Civic pride justifiably demanded action.

City Engineer Hartley, a veteran in municipal operation, had some definite ideas about incinerators and his City Council also had some ideas that demanded careful attention. By reconciling all these various ideas, Consulting Engineer Henry Brinckerhoff, member of the firm now known as Parsons, Brinckerhoff, Hogan & MacDonald evolved an interesting incinerator, attractive in appearance, and resourceful in operation.

How the Incinerator Had to Be Built

Mr. Hartley wanted an incinerator of the crane-and-bin type. He felt very strongly about eliminating the process of dumping refuse on a platform and pushing it into an open port over the incinerator furnace. He also wanted to locate the incinerator in the present public works yard, thereby centralizing all activities under his direction for greater efficiency. This presented the difficulty of locating the incinerator close to Englewood's business district and uncomfortably near the attractive and well developed residential district of which the community is justly proud. Furthermore, the incinerator would be located in the lowest portion of the town with the homes overlooking the area from surrounding hills. Consequently smoke, fly ashes, or odor nuisances had to be eliminated from the start.

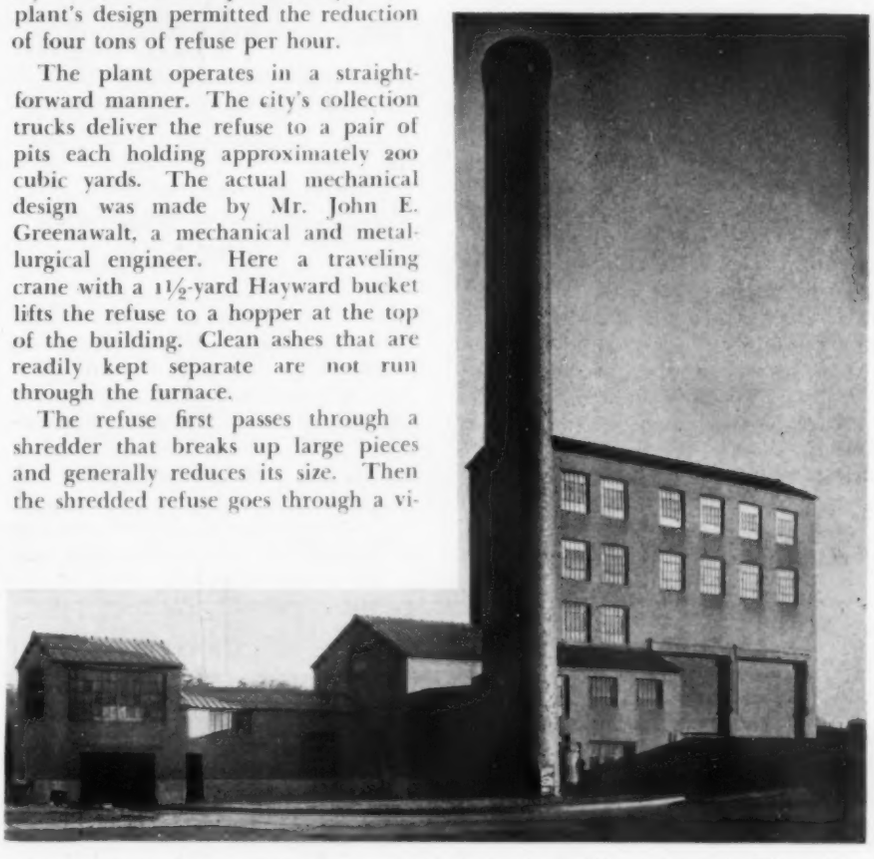
The City Council wanted the incinerator designed to care for refuse as it was then collected. They did not wish to be forced into adopting new refuse disposal habits merely to accommodate this municipal improvement. Garbage and ashes and refuse are combined in one collection in Englewood and the incinerator had to accommodate everything.

Uses Two-Man Crew

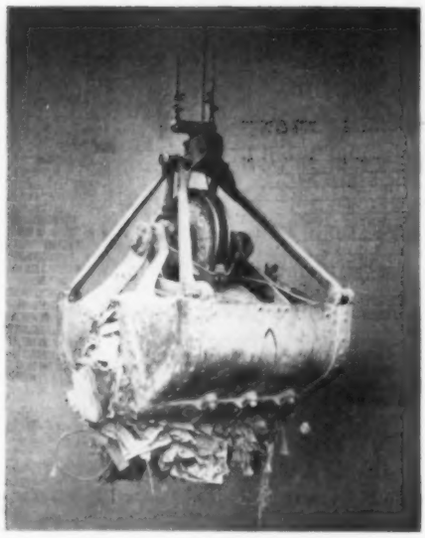
The design that was adopted drew on the principles used in sintering furnaces. Its high degree of mechanization and control over burning, and the fact that it required only a two-man crew to operate it, appealed to Engineer Hartley. The attractive lines of the building and the versatility of the plant which could handle efficiently refuse with widely changing character likewise appealed to the councilmen. The fact that it was a unique design not used elsewhere in the municipal field did not bother either Mr. Hartley or the Council particularly. The plant's design permitted the reduction of four tons of refuse per hour.

The plant operates in a straightforward manner. The city's collection trucks deliver the refuse to a pair of pits each holding approximately 200 cubic yards. The actual mechanical design was made by Mr. John E. Greenawalt, a mechanical and metallurgical engineer. Here a traveling crane with a 1½-yard Hayward bucket lifts the refuse to a hopper at the top of the building. Clean ashes that are readily kept separate are not run through the furnace.

The refuse first passes through a shredder that breaks up large pieces and generally reduces its size. Then the shredded refuse goes through a vibrating screen which separates the refuse into three sizes. The fine material is separated directly without further reduction (about two or three cubic yards a day). It is dark, with enough ash and organic material in it to make a very satisfactory fertilizer and fill material. There is a long waiting list for this material. The "middlings" drop directly through appropriate shoots onto the traveling grate at the start of the burning operation. The coarse screenings land on the grate later after the "middlings" have had an opportunity to dry and start burning. The grate travels slowly, approximately 24 to 36 inches per minute depending upon the character of the refuse to be reduced. The final residue then goes by conveyor to a hopper where it is delivered to a truck and transported to the dump.



Englewood's incinerator is located conveniently in the public works yard. The refuse trucks dump their loads into the bins served by the two large doorways at the right. The incinerator's residue is hauled away from the hopper located in the small building at the left

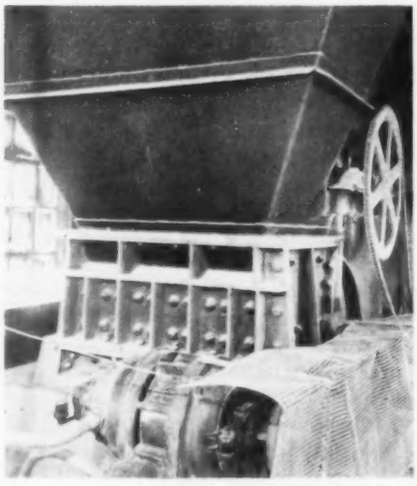


A Hayward 1½-yard bucket picks up the refuse and carries it to the incinerator receiving bin

The incinerator has one serious drawback—at least it appears serious upon a superficial examination. That is its method of igniting the refuse. Originally the design called for the use of an oil burner from which a flame was drawn up and through the "middlings" thereby igniting them, thus generating the hot gases necessary to burn the coarse screenings. The burner operated continuously during the operation of the incinerator and consumed approximately $3,000 worth of oil per year.

However, the war brought about an improvement in this operation. Local ration boards could not see the logic of burning so much oil to operate an incinerator when people weren't able to keep their houses warm. Consequently they directed Engineer Hartley to scout around and find some other method of igniting the refuse in the incinerator.

Like most everyone else, he turned to coal. He built himself a brick furnace, although he prefers to call it a "Dutch oven," lined it with Plibrico, and attached an Iron Fireman stoker to it, designing the entire igniter system to furnish heat equivalent to the oil burner. Its operation was extremely successful. The hot gases from the coal fire seemed much more adaptable to the incinerator than the oil. Apparently the main requirement was for a blast of hot gas to dry and start to ignite the "middlings" after which they furnished their own heat for combustion. At any rate, where the oil cost $3,000 annually, the coal bill ran only to $500. City Engineer Hartley's observation is that when the stack temperature reaches 500°F the stoker can, for all practical purposes, be shut off. The stack temperature, measured by a Bristol recorder, is not permitted to go over 1,200°F; this corresponds to over 2,000°F in the furnace.



As the refuse proceeds through the plant it first receives a coarse grinding and then is screened. The fine screenings are discharged immediately and used as fill material

Refuse Collection Three Times a Week

City forces collect refuse three times a week in Englewood, dividing the town into districts and collecting Monday, Wednesday, and Friday in one area and Tuesday, Thursday, and Saturday in another; business districts, apartments, and hospitals receive collection service every day. The work requires nine to ten trucks depending on the season. A driver and one man do the collecting. Englewood has been using open trucks with canvas covers but expects some time in the near future to replace them with the more modern closed truck. Everything is accepted for incineration except the bodies of dead animals.

Cost of maintenance and operation of the incinerator has run approximately $1.78 per ton of refuse over the six-year period. This does not include depreciation which, as Engineer Hartley points out, is difficult to calculate and subject to the opinions of whoever is doing the calculating. Labor costs have risen steadily during the operating period with no more men involved, but maintenance costs have fallen off, so that the overall cost of plant operation remains the same or nearly so.

Refuse collection has totaled between 12,000 to 13,500 tons per year for the last five years. The totals per month have been as follows and vary as ash collection drops off in the summer.

1945

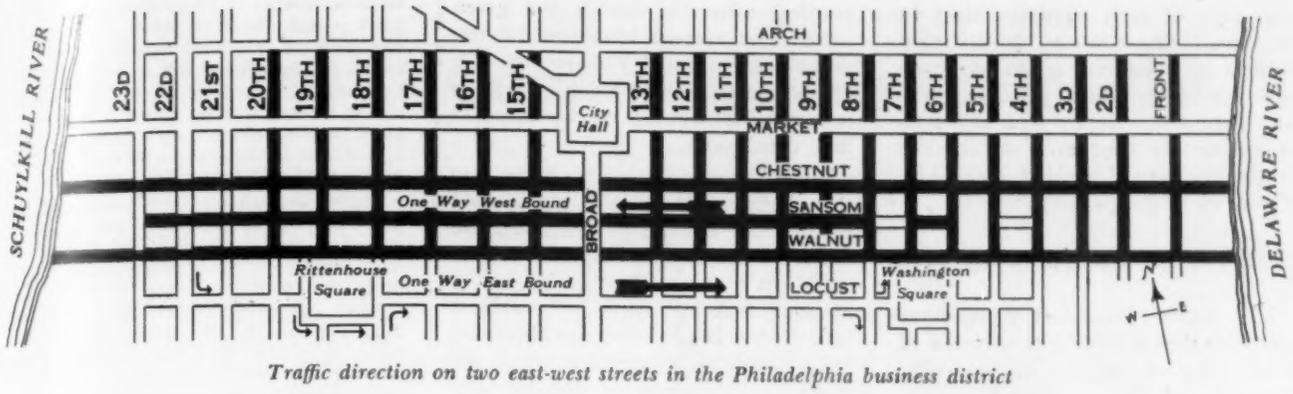
January	1,435	tons
February	1,461	"
March	1,530	"
April	1,087	"
May	995	"
June	881	"
July	771	"
August	786	"
September	842	"
October	1,044	"
November	1,176	"
December	1,506	"

Here is the "dutch oven" and coal stoker that Engineer Hartley uses in place of the oil burner originally supplied for his plant. This furnishes heat to ignite the "middlings" which in turn burn the coarse screenings

OPERATING DATA, ENGLEWOOD, N. J., INCINERATOR

Year	Total Tons	Total Hours	Total Kwhr	Gal. Oil Ton Coal	Rate Ton Per Hour	Total Cost Ton
1940	11,187	2,530	100,360	447.92	4.36	1.60
1941	12,770	2,476	97,640	513.02	5.12	1.62
1942	11,874	2,149	92,960	409.02	4.80	1.80
1943	8,714	1,634	59,050	37.6 Ton*	5.32	2.12
1944	10,268	1,835	71,080	59.0 Ton	5.59	1.78
1945	10,795	1,882	65,400	57.3 Ton	5.71	1.75

* During 1943 change made to soft coal ignitor. Plant not operating during January, February, and part of March.



Traffic direction on two east-west streets in the Philadelphia business district

Traffic Moves in Central Philadelphia!

By LEONARD A. DRAKE
Assistant to Executive Vice-President
Philadelphia Transportation Co.

IT WOULD not be quite fair to paraphrase Mark Twain by saying that "everybody talks about traffic congestion but nobody does anything about it." However, this problem, common to almost all American cities, does lend itself more to heated conversation than to effective action. Thus it is news when a major city, Philadelphia, takes drastic measures to cure a serious case of traffic congestion in its mid-section—and makes this cure effective and at the same time palatable to business interests and the public alike.

On January 2, 1946 parking was banned from 8 a.m. to 6 p.m. on nearly all the one-way streets at the narrow waist of central Philadelphia between the Delaware and Schuylkill Rivers. Elsewhere in this district parking was limited to a half hour, as against the one and two hour regulations formerly in force.

The second drastic step taken by the City of Brotherly Love, as a sort of New Year's resolution, was to forbid the loading and unloading of commercial vehicles during the morning traffic peak from 8 a.m. to 9:30 a.m. on Chestnut Street and during the evening peak from 4 p.m. to 6 p.m. on Walnut Street. In addition, traffic directions were reversed on two of the city's east-west thoroughfares, Sansom and Locust Streets, in order to eliminate one particularly annoying traffic bottleneck.

All these changes took place with what to the outsider must have appeared a meekness and universal acceptance quite miraculous for Philadelphians. There was only one letter of protest in the Letter-to-the-Editor columns of the local newspapers. Even the one Philadelphia newspaper which previously had been lukewarm about these plans for traffic reform had this to say in an editorial dated January 8:

"Motorists in search of 'wide-open spaces' haven't had to leave the center of town these past few days. Philadelphia's new traffic regulations have transformed Chestnut, Walnut, and other streets from obstacle courses into thoroughfares.

"So well have the changes worked that everybody—or nearly everybody—is happy.

"Yes, we think the changes are a good idea. But we'll let you in on a little 'secret.' Traffic is flowing smoothly not only because there are new rules—but because those new rules are enforced."

The Philadelphia formula:

1. Start with official backing of the city government.

2. Get the simple facts—and get them quickly.

3. Have the merchants take a leading role in fact finding.

4. Use all available channels to educate the public, first as to the facts and then as to the proposed remedies.

5. Obtain whole-hearted co-operation from police and magistrates in enforcing the new regulations.

6. First, last, and always do a selling job.

This formula has been tested and found right for Philadelphia; it should work elsewhere too.

By Way of Education

But what is Philadelphia's magic formula? Why were traffic experts in St. Louis slapped down recently in a similar attempt to ban street parking, while merchants in Philadelphia have favored rather than fought these restrictions? The answer is Education—with a capital E. Fact-finding is the first essential, while proper and timely presentation of these facts is equally important. What follows is the Philadelphia story of civic education at its best.

The Philadelphia Committee for the Relief of Traffic Congestion was created in July 1945 by act of City Council. This granting of official status to a committee made up largely of men in private industry was the first step in the right direction. The Committee was and is headed by Robert A. Mitchell, City Traffic Engineer. In addition to a City Councilman, membership includes representatives of the Philadelphia Real Estate Board, Philadelphia Merchants' Association, Yellow Cab Co., Chamber of Commerce and Board of Trade of Philadelphia, Automobile Club of Philadelphia, Keystone Automobile Club, Bureau of Police, and the Philadelphia Transportation Company. In December 1945, representatives of the city's hotel and theater interests were added to the Committee.

It was realized that the next step should be fact-finding. To handle this research properly required money—something the Committee did not then have. In order to get quick action the city's merchants and other private interests represented on the Committee agreed to defray the cost of the first two surveys, in all slightly more than $5,000. It was good psychology to have the merchants directly interested, inasmuch as they had never previously been able to unite on a traffic control program.

National Analysts, Inc., a fact-finding organization with headquarters in Philadelphia, was hired to conduct the surveys, one on curb parking in the central business district and the other on travel habits of mid-town shoppers.

It was decided to take a 50% daytime sample of all cars parked in the central area bounded by Arch, Walnut, 7th, and 18th Streets. Check sheets were used to note all parked vehicles on all

four sides of each alternate block in the area, selected in a checkerboard pattern to make the count as representative as possible. License numbers were noted from 8 a.m. to 6 p.m. as well as the time each car checked in, the duration of parking, and all instances of illegal parking.

Curb Parkers Questioned by Mail

The license numbers of passenger cars were then traced by the Bureau of Traffic Engineering and the following letter mailed out immediately on the Bureau's official stationery.

Dear Mr. .....:

The City of Philadelphia is making a study of automobile parking in the Central City Business District. You can help us in this work. In return, with the aid of this and other traffic surveys we hope eventually to make your trips to and from Central Philadelphia faster and more convenient in every possible way. The immediate job is fact finding.

On the day noted on the accompanying post card your car was parked in the City's Central Business District. Will you be kind enough to check the reason for your visit and, if for business reasons, whether you are an office employee, store employee, store owner in this mid-city area. Please do not sign the card. We do not wish to check on you personally. But PLEASE fill it out and drop it in the mail. You will make a real contribution to our understanding of the habits of Philadelphia motorists.

Sincerely yours,
ROBERT A. MITCHELL,
Chief

In keeping with this polite, straightforward letter was an enclosed penny postcard with the few simple questions on the back as shown in the accompanying illustration. We knew that this approach should result in better returns than are normal for mailed questionnaires (generally between 10 and 20%), but we were not quite prepared for the astonishing actual return ratio of 57%. Car owners were more than willing to cooperate; many made additional comments and suggestions for improving traffic conditions.

A simple code on the face of each postcard enabled us to trace the city districts and neighboring counties from which the curb parkers had come. The sample of more than 2,400 returns was quite sufficient to give us the basic information required to supplement that gained directly from the street survey.

The Shopping Survey

Through cooperation of the sixteen largest Philadelphia department and variety stores the interviewers of National Analyst made a personal approach to 5,000 shoppers selected according to known sex ratios and in keeping with the size of the given store. The average interview did not exceed one minute. This in-store survey was easy, but nevertheless vitally important in shaping the Committee's final conclusions.

Special care was taken to make sure that shoppers who stated they walked to the store did not in fact reach the central business district in a vehicle and then walk. A less careful survey in 1928 had indicated 14% walkers whereas the Committee's questionnaire resulted in a more probable 3% as the proportion of shoppers who actually walked into the designated central business district.

Making the Results Public

The curb parking and shopping surveys were started early in September and completed, together with analysis of results, by mid-October. The first press release was dated October 25 and dealt with the extent of curb parking as revealed by both surveys. Typical excerpts from this release are:

"Less than one person in ten uses a private automobile when on a shopping trip to Central Philadelphia. Only two percent of the customers of Philadelphia's largest department stores and specialty shops come to the Central District in automobiles which are left parked on the streets. . . .

"For a typical weekday there were 13,254 motor vehicles parked legally and illegally anywhere from 5 minutes to all day in the area from Arch to Walnut Streets and from 7th to 18th Streets. This count was taken from 8 a.m. to 6 p.m. At an average of 1.8 persons per car, there are in all some 24,000 people who enter the central city area each business day by automobile and use the streets for parking. This figure is less than 5 percent of the total number of individuals coming to the central city business district by various means of transportation. . . .

"Curb parkers vie with truckers for the available spaces. Altogether there are 1,835 legal parking spaces in the 60 blocks which make up the concentrated central business district of Philadelphia, but only 1,228 parkers were recorded at the noonday peak of a typical business day and many of these were not in legal spaces. Commercial vehicles in process of loading and unloading take up approximately one-third of the available curb parking space in addition to the space definitely set aside for loading and unloading. . . .

"Seven in each ten curb parkers report that they were in town on business. Roughly, one in ten parkers is either a store employee or a store owner, most often the latter. . . .

"The shopping survey revealed that 75.0 percent of all customers of these large merchants of Central Philadelphia entered the area by public transit (high speed lines, trolley cars, buses and trackless trolley). Thirteen percent came by train, 8.4 percent by private auto, 3.2 percent walked and 0.4 percent used a taxi. . . .

Two-thirds of all mid-city shoppers come from Philadelphia proper. Most of the remaining one-third is divided between three counties: Delaware, Montgomery, and Camden in that order. Thirteen percent of shoppers from Delaware and Montgomery Counties used private automobiles as against only 6 percent from Camden and 5 percent from Philadelphia proper. . . ."

On October 30 a second news story was issued on traffic violations within the central city business district. This evidence from the curb parking survey that 40 percent of all vehicles were parked in violation of police regulations was tied in with the statement that police were issuing 800 traffic tickets daily in the area.

While the newspapers were carrying our story in news columns and editorials, the Chamber of Commerce, the Merchants' Association, and Chestnut Street Association were shown the results of the Committee's work by liberal use of tables and diagrams. The accompany diagram "How Shoppers Come to Central Philadelphia" gave a picture to the merchant of just how numerically unimportant the curb parkers were in comparison to his other customers.

(*Continued on page 125*)

CENTRAL CITY PARKING SURVEY

PLEASE FILL OUT AND DROP IN MAIL BOX

Check (✓) the Correct Answer—Don't Sign

My main purpose for parking on .....

between ....., 1945 was:

CHECK ONE ☐ Business ☐ Shopping ☐ Dining or Amusements or both

☐ Home Nearby Other (write) .....

If on business near where car parked, check:

☐ Office Employe ☐ Store Employe ☐ Store Owner

Other (write) .....

Thank You!

Postcard used in the Philadelphia traffic survey

Waterbury's Continuous Six-Year Plan

BELIEVING that the Six-Year Plan of Public Improvements "is a matter of far-reaching community interest and welfare which merits the study debate and cooperation of the people of Waterbury,"* public distribution of the report to individual taxpayers and community groups within the city has been widespread. Copies of the plan have been placed in the hands of all city officials and boards, local industrial and commercial interests, local and out-of-town banks and allied institutions, and mayors and Planning Commissions of cities and towns throughout the state. In addition to lectures to civics classes in the high school, copies have been given to teachers of civics and history. College and university libraries were placed on the mailing list. The community clubs of Waterbury are now making a study of the plan and local newspapers have given it extensive publicity.

The report itself is printed on heavy stock with large pages held together by a red plastic binder. It has many black and white illustrations, including the arresting graph reproduced here, project location maps, and the necessary tables and text in large, clear type. The pages are decorated with a deep yellow border with titles in white on a red panel.

Since it is only a six-year plan, it was impossible to incorporate in it all of the improvements suggested by the various city departments. The first half of the plan is almost entirely made up of projects deferred during the war period but which are considered absolutely essential in order to provide needed community services. As it is to be a continuous six-year plan, each new year added upon the completion of the projects in the first year will contain projects now deferred or new projects as the need arises. As the orderly development of the program is realized, it is believed that the value of such a plan will be recognized by the individual taxpayer and the civic groups.

* Statement from the foreword of "Six-Year Plan of Public Improvements," by Thomas F. Moore, Chairman of the City Plan Commission, Waterbury, Conn.

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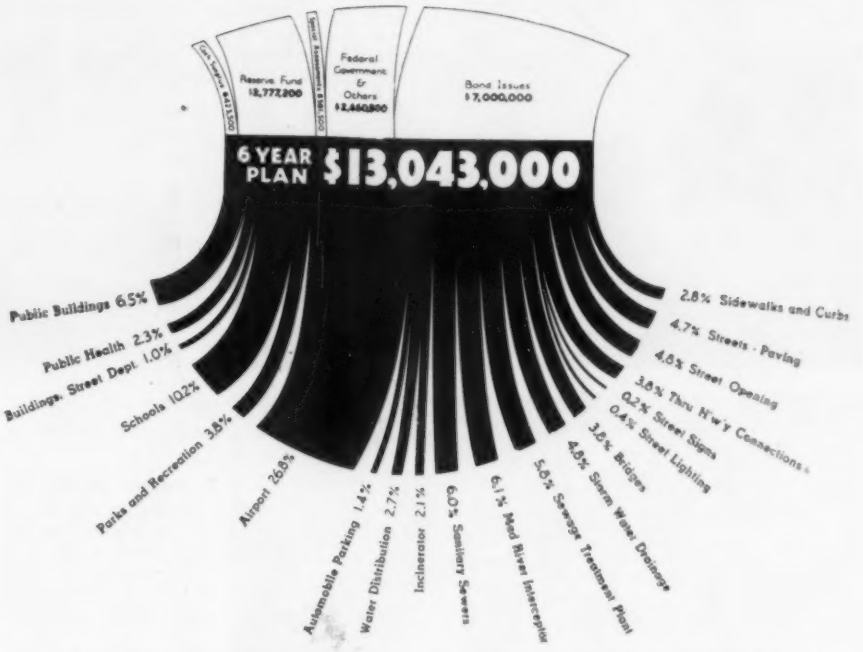


How Waterbury, Conn., would raise and spend the funds for its six-year plan

Plazas and Gridirons*

EVEN the smallest city can have the pleasant advantage of a superb and distinctive plaza if it locates all of its important buildings and monuments there in a well arranged assembly, as at an exposition, so that each complements the effect of the others. The purpose of a city plan is to make such an idea intelligible and attainable. No artistic objective, however, is more stubbornly resisted by the modern block system than this. If the lots are plotted according to the unfortunate rectangular system and officially approved for sale, then it is useless to attempt distinctive development in the part of the city so planned.

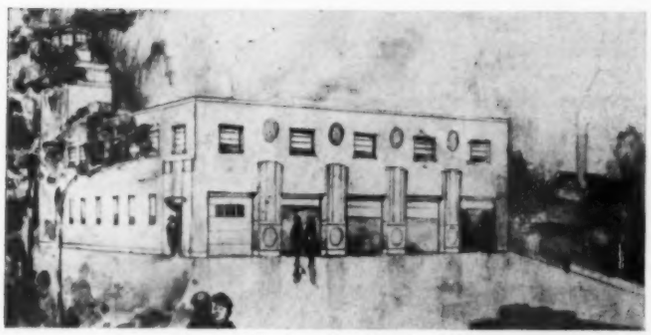
Every technician engaged in site planning today has an obligation to give careful consideration to every factor, including the artistic factor, and it is to be hoped that the still customary block pattern as a plan for city development will be finally cast aside by its remaining sluggard adherents.

Modern life and modern building methods prevent a servile imitation of old city arrangement. We must never lose sight of that fact, lest we would become hopelessly sentimental. The vitality of the glorious old models should inspire us to something other than fruitless imitation. If we seek out the essential quality of this heritage and adapt it to modern conditions we shall be able to plant the seeds of new vitality in seemingly barren soil.

This attempt should not be deterred, no matter how great the discouragements may be. We can make full allowance for the requirements of modern building practices, public health, and traffic circulation without abandoning every consideration. These things need not force us to reduce city building to a mere technical procedure like the building of a road or a machine, for even in our busy day-to-day activity we cannot forego those noble impressions that engender artistic conception. It must be remembered that art has a legitimate and vital place in civic arrangement, for it is this kind of art alone that daily and hourly influences the great mass of the people, while the influence of the theater and concert hall is generally confined to a relatively small segment of the population. Public planning authorities should take this factor into careful consideration and, as far as is possible harmonize the essential old principles with present day necessities.

* Excerpts from Charles T. Stewart's new translation of "The Art of Building Cities," by the famous Viennese architect, Camillo Sitte, originally published in 1889, and now available for the first time in English. See page 147 of the February issue.

Extensive Improvement Program Voted for Cushing, Oklahoma



ABOVE: *At the left is a drawing of the new fire station and at the right, the memorial hall.* LEFT: *The new city hall*

ON DECEMBER 11 the people of Cushing, Okla., at a special election, authorized the issuances of the following improvement bonds: $225,000 of park improvement bonds, including a structural steel stadium at the football park and a recreation center as a memorial to the community's war dead; $150,000 for a new city hall; and $45,000 for a new fire station.

The three bond issues were sold on January 31 at the following average interest rates: the $225,000 twenty-year serial bonds at 1.199 percent and the other two issues, ten-year serial bonds, at 1.055 percent.

The memorial recreation building will cover an entire city block. It will be a fire proof building, approximately 168 x 278 feet, with face brick exterior. The facade of the memorial section will be two stories high and this section will include, at the entrance, a memorial hall 26 x 40 feet, with appropriate indirect lighting effects and, in the center, an alabaster altar facing the entrance, on which will appear the names of the community's war dead. The altar will also have appropriate lighting effects.

On the left of the memorial hall is a women's salon and on the right a mens' lounge. On the second floor will be three large rooms which will be used largely by women's groups clubs, and for cultural functions. There will be a wide corridor behind the memorial section and immediately behind this an arena 100 x 114 feet, which is the central section of the structure. This section will provide the facilities for many indoor sports, such as basketball volley ball, roller skating, dancing, etc. Seating capacity will be provided for some 1,200 to 1,500 spectators. This section will also be provided with a small stage, dressing rooms, and locker rooms, showers, etc.

On the left of the memorial and arena sections, in front, is a meeting room for girls' clubs. Adjacent to this is another small meeting room and back of this is a banquet room 29 x 70 and a kitchen and utility room.

On the right side, in front, is a meeting room for boys and another small meeting room. Back of and adjacent to these rooms is a six-alley bowling alley.

Back of and adjacent to this main structure is a building 100 x 180 feet which will house a swimming pool (60 x 150 feet) together with dressing rooms, showers, lockers, etc.

It is planned to establish a recreation department under competent, trained direction and to operate the facilities on a year-round basis.

Cushing is a tax-free city and the retirement of these improvement bonds will not entail any tax levies; the interest and amortization will be provided for from current revenues.

In addition to these improvements, plans are in the study stage for an addition to the municipal hospital. The present facilities provide for about thirty beds and it is expected that the hospital will be expanded to approximately one hundred beds.

It was originally planned to start construction on the recreation center and the fire station early this spring and to build the city hall during 1947. The present material and labor situation is such that it is doubtful if any work can be started until late in 1946, if then. It is quite possible that nothing can be done before 1947.

J. W. FLINT
City Manager

Income-Payroll Tax for Toledo

WITH the adoption o fa 1% income-payroll tax, effective March 1, Toledo, Ohio, has become the second city in the country to levy an income tax. The Philadelphia income tax, adopted in 1940, yielded in 1944 half as much as the city received from the property tax. The Toledo tax is more inclusive than that of Philadelphia since it taxes the profits of corporations.

The Toledo tax is levied on wages, salaries, and commissions of all residents and on earnings in Toledo of non-residents; also on net profits of all Toledo businesses and professions, and on that part of the net profits of corporations earned in Toledo. Declarations of estimate of the tax will be required of those not classified as employees. Employers will deduct wage and salary taxes from pay checks.

Toledo estimates a tax yield of between $3,000,000 and $4,000,000 annually. Proceeds from the tax will be limited to the following funds: Bond retirement, general operations, capital improvements, replacement and maintenance of municipal equipment, and the stabilization reserve fund, which later will be turned over to the school board and the county.

Modern Lubricating Oils

Once a lubricating oil merely provided a film between friction surfaces of bearings, cylinders, and gears, then higher speed pressures and heavy duty demanded "action" on the part of the oil. Into the picture came "additives" which resist oxidation of the oil, corrosion of the bearings, accumulation of deposits, that withstand pressure and disperse soot. Here is a bare outline of a subject important to all municipalities

By C. W. EKLUND
Beacon Research Laboratory
Technical and Research Division
The Texas Company, New York

ALONG with the many changes and improvements in mechanical design of the diesel and gasoline engines developed for use in tractors, trucks, buses, and portable lighting plants, came lubrication difficulties which had to be overcome by the oil refiner with the cooperation of the engine manufacturer. These difficulties, such as ring sticking, piston scuffing and bearing corrosion, were remedied by the use of additives in the lubricating oil. The name given to the first type of diesel oil additive was "detergent."

During the years directly preceding and including World War II, great strides were made in developing oils which would perform satisfactorily under the severe conditions encountered in modern engines. The subject is discussed in some detail in *Lubrication* for January 1946, available from The Texas Company, New York 17, N. Y.

Anti-Oxidants

A lubricating oil additive may be defined as a chemical compound which imparts new properties to an oil or improves those properties which the oil already has. The major cause of oil deterioration is oxidation. Prolonged oxidation results in the formation of sludge which is often the cause of clogged oil lines, filters, and screens and this quite often leads to engine failure.

Additives which increase the resistance of an oil to oxidation are called anti-oxidants. There is some evidence that the additive becomes oxidized in preference to the oil. Eventually, therefore, the additive becomes depleted with subsequent oxidation of the oil itself. For this reason, when operating any equipment under conditions in which oxidation can take place, periodic oil changes should be made even though the new oil may contain an excellent anti-oxidant.

Anti-Corrosives

With the continuation of improvements in automotive, diesel, and aircraft engine design permitting the development of more power for the equivalent size and weight engine, new materials were necessary to withstand the higher stresses imposed. Chief among these was the improvement of bearings. The demand for greater load-carrying capacity and higher fatigue resistance fostered the development of bearing metals other than babbitt; i.e., copper-lead, lead-plated silver, cadmium-silver, and cadmium-nickel alloys.

It was soon found, however, that the usual well-refined uninhibited oils could be very corrosive to these bearings, especially at the high temperatures obtained in automotive, aircraft, and high-speed diesel engines. Corrosion of bearings is generally attributable to a reaction between the acidic products of oxidation and one of the constituents of the bearing metal. For example, the acids formed by the oxidation of the oil will attack the lead in copper-lead bearings taking it into solution and leaving a porous copper structure which will eventually crumble and break away. Bearing corrosion may best be controlled by laying down a protective film on the surface of the bearing so as to prevent the acids from reaching the metal. Materials which form such a protective coating are known as anti-corrosives or corrosion inhibitors. When anti-corrosives are used in conjunction with anti-oxidants, bearing corrosion is reduced, while at the same time the life of the oil is extended more than if an anti-oxidant were used alone.

Detergents

The dictionary defines the action of detergency as the cleansing or purging away of foul or offending matter. The term detergent classifies additives which have the property of preventing the build-up of any deposits or removing those already formed (be it sludge, varnish, lacquer, or carbonaceous products) which interfere with the efficient operation of internal combustion engines. These materials, which originate from oil deterioration as well as from combustion chamber blow-by, are a considerable problem, particularly in heavy duty equipment.

Since these additives may function so as to prevent rather than remove deposits, the term "detergent" is falling into disfavor in some circles. Nevertheless, regardless of their mechanism, it should be emphasized that detergents serve a very important function in promoting the engine cleanliness properties of lubricating oils.

Dispersants

The action of dispersion in a lubricating oil is of a physical nature in that the products of fuel combustion, chiefly soot, along with some oil decomposition products, are held in suspension in the oil. The ability of oils containing dispersants to retain carbon black (which may be considered comparable to blow-by soot) in suspension is marked. When a sample of oil containing disperants is compared to one without it, it will be observed that the carbon black settles to the bottom in one instance, which denotes low dispersion, while it remains suspended in the oil in the other, which indicates good dispersion properties.

Extreme Pressure Agents

A lubricant must maintain a film between moving metal surfaces. Under operating conditions where the clearances are relatively large, and loads are low, the problem is simply one of selecting the proper viscosity grade of oil. In service where the pressures are high, the lubricant is forced out and seizure of the metals may occur. To prevent this, additives known as extreme pressure (E.P.) agents were developed.

Pour Point Depressants

The pour point of an oil is the lowest temperature at which the oil flows under conditions established by the A.S.T.M. procedure. Some lubricating oils contain wax, the presence of which raises the pour point of the oil. Although the problem of pour has always been more or less in the minds of oil refiners and equipment users, the need for oils which would flow freely at extremely low temperatures

was emphasized during World War II by the Army Ordnance because some army equipment had to be used in very cold climates.

Although a number of theories have been advanced to explain how pour depressants function, the most widely accepted one is that these materials coat the surface of the minute wax crystals. In this way both crystal growth and oil absorption by the wax are prevented at reduced temperatures. As a result, no gel formation occurs and the oil is free to flow at low temperatures.

Viscosity Index Improvers

The physicist defines viscosity as a measure of the relative fluidity of a liquid at some specific temperature. Viscosity will vary inversely with the temperature, i.e. the colder the oil, the heavier or more sluggish will it become. As the temperature is raised, the same oil will become more and more fluid. Viscosity index indicates the rate of change of the viscosity of a lubricating oil with temperature. The higher the viscosity index, the less the viscosity of the oil changes with temperature.

Viscosity index (V.I.) by itself is not indicative of the oxidation stability or performance qualities of a lubricating oil. Low V.I. oils may give as good performance as high V.I. oils. In machinery where starting temperatures are unimportant, such as stationary engines operated inside buildings, low viscosity index oils have been used quite extensively for years with excellent results.

It is in connection with extending the usuable temperature range of low V.I. oils for automotive engine service where starting and operating temperatures are sometimes low, that it has been found necessary to develop viscosity index improvers.

Why Overcrowd the Land?

WITH a new building boom now gaining momentum, the problem of preventing excessive height and bulk of buildings again comes to the fore. Many a city will regret for decades to come the unwise land-overcrowding certain to take place during the years immediately ahead if building codes and zoning ordinances are not promptly and intelligently revised.

Special Interest Bulletin No. 224 of the National Board of Fire Underwriters' Committee on Fire Prevention and Engineering Standards (85 John St., New York 7, N. Y.) merits careful study in this connection. Answering the argument that excessively tall buildings are justified by high site costs, this bulletin points out that the item of land value is a purely artificial one "which is becoming of less moment with the changes in transportation, especially in places of less than metropolitan size."

The bulletin might have added that fantastic land prices would not persist if it were made illegal to so overcrowd the land as to permit profits at such prices. The alternative would be a spreading out of land values to the benefit of the great majority of property owners. The bulletin also discusses the relation of building heights to airplane travel and to the endangering of life by fire.

More Operating Revenue for Cleveland

AT A SPECIAL election held in Cleveland, Ohio, on February 19, the voters approved a charter amendment to authorize a 2½-mill increase in the operating levy for the next three years. A vote of 20,917 for the amendment and 6,927 against earmarks one-half a mill for a special maintenance fund.

This "extraordinary" maintenance fund is to be administered by the Finance Director, subject to the approval by the Board of Control. Departments desiring to draw on this fund would have to demonstrate the need for it and that the proposed work was not covered by the regular departmental budgets.

The charter amendment was first proposed by the city on the basis of a report on city operating revenue by Dr. and Mrs. Thomas H. Reed to Cleveland Finance Director Joseph T. Sweeny. Dr. and Mrs. Reed's study is part of a series being made by the Consultant Service of the National Municipal League in the Cleveland metropolitan area.

According to the Reed report, the city of Cleveland seems to be entitled to more operating revenue in view of the fact that the city is operated at a moderate cost; that the cost of living has increased since the 7½-mill operating levy was set; and that Cleveland's taxpayers are in a better position to pay taxes than ever before. The report states, however, that even an increased income for Cleveland may not enable the city to get along comfortably unless there is an adjustment "of the activities of the city and those performed by the county and state." The report proposes that all tax-supported activities that are of interest to the whole metropolitan area should be put on the county budget. Specifically mentioned are welfare activities, hospital maintenance, and other institutions.

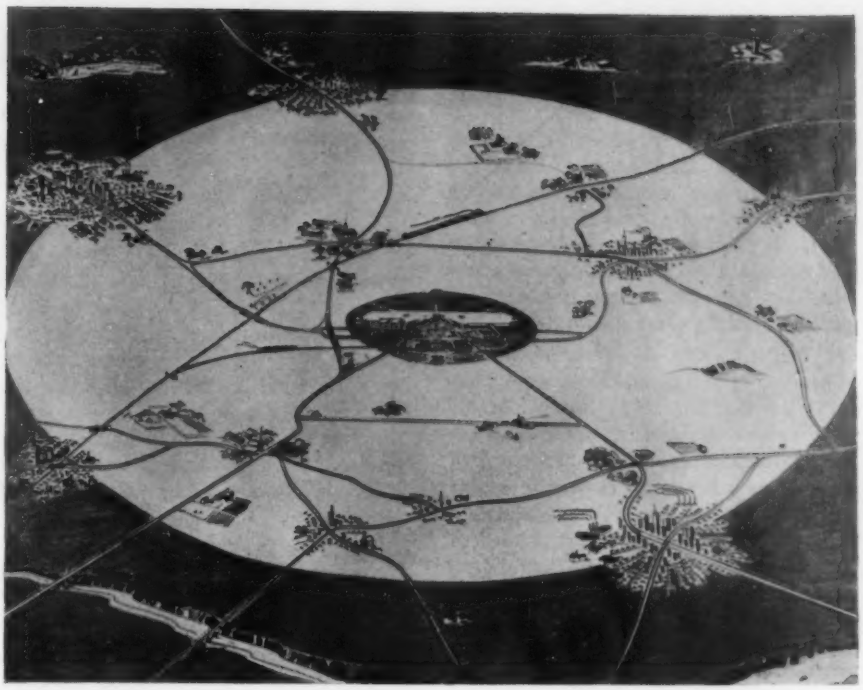
Connecticut Cautions New York on Street Trees

AN official committee of the Connecticut Tree Protective Association, the oldest of the state shade tree associations, was designated last summer to go to New York City to investigate the controversy that was then raging about the question of whether or not trees should be planted in front of Best & Company's new retail store on Fifth Avenue. THE AMERICAN CITY reported at the time (July 1945, page 90) that, poetically at least, Philip LeBoutillier, President of Best's and opposed to planting trees on Fifth Avenue "except on the park side in front of a park," had had the last word when he published some verse in a newspaper advertisement which concluded with the words, "Things out of order . . . like trees in the city arouse my deep pity."

Now the release of the report of the Connecticut committee endorses Mr. LeBoutillier's position so strongly that his victory may be said to be moral as well as poetical. The committee examined tree planting in the neighborhood in question and found that the trees were in poor condition. Those in front of nearby buildings were found to have "sallow and chlorotic" leaves, and 30 to 40% of the tops of the trees were dead or dying. Trees in soil boxes around Rockefeller plaza, which is in the immediate vicinity, were found to be in particularly sorry condition. The committee observed that it was "quite obvious that the terrific reflected heat on Fifth Avenue produces an abnormally high rate of water loss from the foliage with no compensating water replacement."

The committee is of the opinion that the cause of shade tree appreciation will be harmed rather than aided by the continuance of indiscriminate tree planting in urban locations "where the physiological outlook or future for the trees is practically hopeless." Furthermore the committee urges that there be no further large tree planting in unpromising city locations or in places where no "planting strip" exists between the sidewalk and the street.

Steps in the Air Age



Typical regional layout of a centrally located airport with railway spur and all roads leading to it

THE Ric-wil Company, Cleveland, has issued an intriguing pamphlet, *Looking Ahead to the Airport of Tomorrow.* It is compounded of sound thinking and controversial propositions.

The idea advanced—central heating at an airport—is not new—the larger airports already use it in their buildings, as do many civic centers and other groups of institutional buildings.

A number of airports have not only an administration building and hangars but industrial buildings or factories, shops, and recreational buildings. Where these exist, central heating offers advantages, such as space gained by eliminating boiler plant, and often cold storage and refrigeration machinery space; reduced fire hazards; elimination of coal deliveries to a dozen heating plants; elimination of ash removal at these points and of all the noise, dirt, smoke and care of individual plants.

Central heating can be most efficient if it is part of a complete plan worked out in advance of construction. Therefore Ric-wil visualizes and proposes a different approach to main airport planning. It urges that adjacent towns, each alone unable to support a secondary airport, combine to sponsor together an inter-community airport within, say, half an hour of every town. The controversial element here is that many of these towns now want their own airports moreover, when personal flying becomes more popular, as it surely will, many towns will have to have their own airports. The pamphlet does not raise this question. Perhaps the answer is that even though many towns will have their own airports eventually, the *present* need is to attract air service as close to each as possible. An airport serving, for example, nine towns of 1,500 to 10,000 population will attract such service long before any one of the towns can possibly do it. Here is the proposal:

There are hundreds of medium and smaller sized cities in the country which at present do not have the population to support their own airports for scheduled airline stops. However, considered on a regional basis, many are close enough to each other so that their combined needs would justify one. It is for such conditions that The Airport Center of Tomorrow is designed. Because such an airport would most likely be located not in a city, but in an undeveloped area between cities, this plan outlines the possibility of a completely new community or center surrounding the airport itself. This new community would serve the surrounding municipalities, but would in no sense compete with them, the booklet maintains.

The rub is that the proposal contemplates the attraction of new industries to the regional airport. Whence do these industries come—from the participating towns? Hardly. What a demolition of a beautiful friendship there would be if taxpaying employment-giving industries moved out of the town to the regional focus.

Obviously one solution to this difficulty would be to persuade new plants and sub plants of large industrial concerns to come into the region and agree to build at the contemplated airport. When two to six of these had been established on the project, the next step could be sports and recreational facilities—pavilion, playground, parking areas. With such activities in prospect, or guaranteed, there would be sure to be visitors which might justify one or two hotels. Some of the personnel would want to live near their work, which would require houses.

There are two ways to achieve this kind of development. If you get the booklet, see the loading platform thrusting out at the top of the plan with the spaces for seven airplanes circled around it. That platform can be cut to half its length to begin with. The middle portion of the administration building together with the hangars can do at the start. As the years roll by the rest of the plan may be developed.

The other way is to visualize the whole project and work it out, selling a little here and more there until it all has been contracted for. In building it on paper, the local aspirations for an airport in every town will have been considered and worked into the regional plan so that no towns (or their citizens) will sacrifice any future advantage. Eventually each town will have facilities for the type of service which most suits it—personal planes, pickup, feeder, and some regular service. At the joint regional airport they will perhaps eventually have main line service.

But How to Get Going

The first or shoestring method of development, undoubtedly conservative as it is, may mean a long costly wait while the air age catches up with the locality. The second method, whereby the total project is built up on paper bearing signatures guaranteeing participation, though slightly in advance of the air age, would probably bring it more quickly. The first step is to count off the towns which should cooperate with one another. The second step is to bring together representatives for the several muni-

cipal governments, Chambers of Commerce, Lions Clubs, Merchants Association, Retail Association, Boards of Trade, Real Estate Boards, bus companies, and simmer them all down into a large committee representative of the region. In this second step direct action is likely to be secured more quickly if the approach is made through the mayors, the city managers or councils, who can appoint a consulting engineer to make a survey.

The third step is for each town to submit to the committee a report on its potentialities as a support of air travel and freight. The committee correlates this material. The fourth step is to take the data to the major air lines: Here's our present business. What is it worth to you in terms of service? Here is what we propose to do. We intend to create an airport center, with several factories and good transportation to every one of the participating communities.

The fifth step is to attract the industries. There may be farmers who grow perishable goods, which require refrigeration at the airport. Manufacturers of small light products that can be distributed economically by air may become interested. Having interested them, the sixth step is to make arrangements to supply ample power, water, heat plus process steam if required.

Who'll Pay for It All

In the beginning the regional airport would be financed as a joint municipal project. The revenue to carry capital investment and operating charges for the field will come from: rents from airline companies using the field, rents from private plane operators, rents from concessionaires in the terminal building, sale or lease of land adjacent to airport for the erection of more factories, business houses, garages, cold storage and other warehouses, residences, hotels, and other buildings. If all went well, the largest financial return could come from the utilities serving the airport community, particularly from the sale of steam for space heating. Many existing large airports must write their annual reports in red ink because the revenue from airline and hangar leases is insufficient to meet costs.

Fellowships Available

The Graduate School of Design of Harvard University will offer two or three fellowships for advanced study in city or regional planning for the academic year 1946-47. The stipends will not exceed $1,500 each. Applications should be made prior to April 15 to the Chairman of the Department of Regional Planning, Robinson Hall, Harvard University.

The applicant should give a thorough account of his training and experience and should outline his program of study or research which he would undertake were he to be awarded one of the fellowships. Fellowships are ordinarily open to students who are candidates for the Master's degree or for the Doctorate. The requirements for entrance as candidates for these degrees are stated in the pamphlet of the Department of Regional Planning which may be obtained by writing the Secretary of the Department at Robinson Hall.

The Proper Use of Fire Extinguishers

Pin this page on your bulletin board and make a memo of it for every municipal department

By E. A. WARREN
Vice-President
The General Detroit Corporation
Detroit, Mich.

A SMALL fire starts in an electrical motor in a municipal garage. It spreads to an open drum of gasoline used to clean motor parts. Discovered by one of the drivers entering the building, it still could be stopped had the correct extinguisher been at hand and understood. The extinguisher the man saw was a soda-acid type which he promptly inverted and aimed at the burning gasoline, spreading the fire. He had to retreat and by the time the fire department arrived, most of the building with its trucks and cars was destroyed.

Over and above the loss to the city of the building and equipment, this driver risked his life by using a soda-acid extinguisher when he should have been provided with a carbon dioxide or vaporizing liquid extinguisher for flammable liquid and electrical equipment.

There are five categories of fire extinguishers: soda-acid, vaporizing liquid, carbon dioxide, water, and foam. For small fires involving ordinary combustible materials, i.e. wood, paper, or rubbish, use a soda-acid extinguisher. Aim the stream at the base of the fire, not at the smoke or flames, and when the fire is out search for any smoldering embers and drench them.

Gasoline, paint, and kerosene must be smothered. Water spreads the flames. Use vaporizing liquid (especially processed carbon tetrachloride), foam, and carbon dioxide to smother. With a carbon dioxide extinguisher, direct the discharge as close to the burning surface as possible. Start with the flames nearest you and progress forward, slowly moving the horn from side to side. The discharge should be continued even after the flames have been extinguished, to cool the liquid and prevent a reflash.

With a vaporizing liquid or foam extinguisher, however, play the stream against the far side wall of the container, just above the burning surface. Walk around the container, directing the stream so as to cover as much area as possible. Take care that the stream is not directed into the burning liquid. In fighting fires where liquids are spilled on the ground, put out the flames that are nearest you first, and then work forward into the fire.

Foam extinguishers contain a liberal amount of water, and so have a considerable cooling effect. They are operated by being turned upside-down. When applied on a burning liquid, the foam floats on the surface, forming a blanket that puts out the fire.

Pump-type extinguishers using water may be equipped with a spray nozzle to atomize the water. When fighting fires, as with any other enemy, maintain a position between the fire and an exit.

If the fire is burning outdoors, or in a strong draft, keep your back to the wind to avoid smoke. Stand as far back from the fire as conditions and use of the extinguishing agent permit. For example, a 2½-gallon soda-acid extinguisher will throw an effective stream as far as 30 to 40 feet. Keep all fire extinguishers ready for instant use, so that they will not fail you when needed. Service them at least once a year and recharge immediately after use. Use the annual refilling period for holding fire extinguisher drills. Demonstrations by fire department representatives are a valuable form of training in the use of the proper extinguisher.

Appointment of these city managers was announced in THE AMERICAN CITY *last month. They are, left to right: J. M. Nagle, Houston, Texas; Harold M. Hines, Pasadena; Arthur B. Sullivan, San Mateo, Calif.; Robert W. Palmer, Old Town, Me.*

City Manager Appointments

FRANK T. ADAMS, city manager of Presque Isle, Me., 1933-35; Ellsworth, Me., 1939-41; and Belfast, Me., 1941-43; and more recently released from the Navy, has been appointed city manager of Skowhegan, Me.

WALTER BARTHOLOMEW, formerly manager of Dunedin and Tarpon Springs, Fla., has been appointed first city manager of Cocoa, Fla.

LEE BLACK, superintendent of the Blue Bonnet Ordinance Plant at McGregor, Texas, has been appointed city manager of Georgetown, Texas.

FRED BRAWNER has succeeded Dan Odell as city manager of Sapulpa, Okla.

ORVILLE C. BUTLER, former director of public works, has been appointed city manager of Niagara Falls, N. Y., succeeding H. Wesley Clark.

RICHARD H. CUSTER, former acting city manager of Two Rivers, Wis., and more recently in the Navy, has been appointed city manager of Fort Fairfield, Me.

ROBERT J. EPPLEY, JR. has succeeded Walter L. Staumbaugh as city manager of Washington Court House, Ohio.

FRED GROSS has been appointed acting city manager of DeLand, Fla., and may receive permanent appointment.

DONALD F. HERRICK, former manager of Albion, Mich., and Oberlin, Ohio; Superintendent of Utilities, Charlevois, Mich., and more recently a major in the armed forces, has been appointed first city manager of Carey, Ohio.

ARTHUR E. J. JOHNSON, city manager of Clarinda, Iowa, has been appointed first city manager of Shenandoah, Iowa.

COL. HENRY M. SALLEY has been appointed manager of Tarpon Springs, Fla.

D. C. TURNER has succeeded Donald Judkins as city manager of Largo, Fla.

DONALD C. WAGNER, city manager of West Reading, Pa., 1927-38; Ephrata, Pa., from 1938-42; and staff member of Public Administration Service since 1942, has been appointed first city manager of Long Beach, N. Y.

LLOYD WATERSTRAUT, city manager of Sturgis, Mich., 1927-28; and 1932 and 1942, and just released from the Navy, has been appointed city manager of Three Rivers, Mich., succeeding Clayton Conrad.

ROSS S. WINDOM, former manager of Westerville, Ohio, 1930-40; Portsmouth, Ohio, 1940-42, and more recently a colonel in the Army, has been appointed first city manager of Sarasota, Fla.

C. M. WOODBURY has succeeded Lea Rowlands as manager of Roswell, N. M.

CLARENCE E. RIDLEY, Director
International City Managers' Association, Chicago, Ill.

The Municipal Bond Market

THIS month, in place of the usual list of recent bond sales, THE AMERICAN CITY presents, through the courtesy of the Chemical Bank and Trust Company of New York, a part of a copyrighted survey showing a 13-year comparison of prices and yields of state and municipal bonds.

The complete survey, which embraces bonds of every state having debt publicly outstanding, as well as those of at least one city, county, or revenue authority in each state, carries price records for the individual issues back to December 1933.

During this period the average price of 100 representative issues rose from below 91 to 134¾, and the average yield declined to 1.47% from 5.29%.

The bank, in a supplemental tabulation, a part of which is here reproduced, sets forth prices and yields for 20 issues selected to give weight to geographical factors. Despite the steady shortening of maturities in this group, the average price rose from 92¼ in 1933 to 125¾ in 1945, and the average yield declined to 1.16% from 5.18%. The full report is available without charge from the main office of the Chemical Bank and Trust Company, 165 Broadway, New York 15.

TWENTY SELECTED BONDS

(Geographical cross section of entire list)

			December 1933		December 1934		December 1935		December 1943		December 1944		December 1945	
	Rate	Due	Price	Yield	Price	Yield	Price	Yield	Price	Yield	Price	Yield	Price	Yield
Birmingham, Ala.	4¼%	1957	70	7.15%	96	4.80%	109¼	3.85%	128⅛	2.10%	128⅞	1.90%	128½	1.75%
Phoenix, Ariz.	4½	1950	64	8.65	100½	4.45	110	3.60	103	3.97	106	3.30	107	2.83
San Francisco, Cal.	4½	1963	96	4.75	108½	4.00	117½	3.50	143¼	1.85	141⅜	1.85	144⅛	1.60
Hartford, Conn.	4	1950	103	3.75	114½	2.85	119½	2.40	119⅝	.85	117¾	.70	114⅞	.65
Jacksonville, Fla.	5	1950	96	5.35	111	4.05	118½	3.40	122⅜	1.35	121⅜	1.00	118½	.80
Atlanta, Ga.	4½	1956	107½	4.00	122	3.10	129	2.65	136⅜	1.30	135⅜	1.20	134⅜	1.00
Louisville, Ky.	4¼	1968	101	4.20	120½	3.25	128¼	2.90	150⅝	1.70	149½	1.70	153⅜	1.45
New Orleans, La.	4½	1950	84	6.05	95	4.95	110	3.60	119⅝	1.30	118⅜	1.00	116⅜	.80
Minneapolis, Minn.	4	1950	96	4.35	107	3.40	118¼	2.50	117½	1.20	116⅛	1.00	113⅜	.90
Omaha, Nebr.	4	1950	97½	4.20	110½	3.15	118	2.50	119⅛	.95	117½	.80	114¼	.65
New York City	4¼	1981	84	5.15	102½	4.15	109	3.83	134¾	2.75	137½	2.64	148⅜	2.25
Rochester, N. Y.	4¼	1956	95	4.60	113	3.40	123½	2.75	131⅞	1.45	132⅛	1.25	131⅛	1.10
Raleigh, N. C.	4½	1950	65	8.50	85	6.00	101½	4.35	118½	1.50	117⅞	1.15	116½	.85
Cincinnati, O.	4½	1955	104	4.20	123	3.00	126½	2.75	134⅜	1.25	134¼	1.05	131⅜	1.00
Tulsa, Okla.	4½	1952	94	5.00	102½	4.30	112½	3.50	126⅜	1.20	124⅞	1.05	122⅜	.95
Pittsburgh, Pa.	4½	1953	104½	4.15	118	3.20	126½	2.60	127½	1.40	126⅛	1.25	125½	1.00
Dallas, Texas	4½	1950	94½	5.00	107	3.90	115	3.20	121⅜	1.05	119	.95	116⅛	.85
Richmond, Va.	4½	1960	106½	4.10	122½	3.20	129	2.85	143⅜	1.50	143⅞	1.35	144⅜	1.15
Spokane, Wash.	4	1950	84	5.50	103½	3.70	111⅜	3.00	118⅞	1.00	117	.85	114⅜	.70
Wheeling, W. Va.	5	1950	99½	5.05	112½	3.90	120	3.25	123⅜	1.25	121⅜	1.00	118	.90
Average Price and Yield			92¼	5.18	108⅜	3.84	117⅜	3.15	127⅛	1.55	126¼	1.35	125⅜	1.16
Average Maturity			21½ years		20½ years		19½ years		11½ years		10½ years		9½ years	

When buildings, stores, homes, offices, and schools are readily accessible to *people*, every part of your community prospers. Retailers enjoy steady profits. Real estate values are maintained. Tax collections are stabilized. Your city grows soundly into a well integrated network.

That's why the main job of any urban transportation system is MOVING PEOPLE, not vehicles.

Consider these facts in your city planning: The average automobile passenger uses 500 square feet of street space and needs 140 square feet of parking space—almost as much space to park his car as he needs to do his work. The average transit rider needs no parking space, uses only 70 square feet of street space—one-seventh as much as the automobile passenger.

Because the average load for a single public carrier is 50 persons (as compared with 1.75 for an automobile), public transit offers a simple, most economical way to reduce traffic congestion. It minimizes the necessity for costly street widening, insures the free and easy flow of people and goods throughout the community.

Where they converge in the downtown area, trolley-coach lines, for example, can carry 10,000 people per hour in one direction, at the busiest times. Quiet, free-from-fumes, trolley coaches may be routed through restricted school areas, past churches, and through the most attractive residential sections.

Smooth starting and stopping, with wide doors that speed loading and unloading, trolley coaches are able to maintain high schedule speeds. Their great flexibility and maneuverability make it possible for the drivers to keep moving in congested traffic.

Every big, fast, public carrier—rapid transit, streetcar, and trolley coach—puts the accent on *moving people first*. Team up with your public-transit company, and you'll make your city a better place to live. *Apparatus Dept., General Electric Company, Schenectady 5, N. Y.*

Have you seen

LIFESTREAM OF THE CITY

the new movie on urban transportation?

Ask your G-E representative how you can arrange for a showing.

GENERAL ELECTRIC

Traffic Control and Facilitation

President Truman Calls National Conference on Traffic Accidents

By MAJOR GENERAL PHILIP B. FLEMING
Administrator, Federal Works Agency

ALTHOUGH four years of war brought to the American people on the home front many deprivations and some hardships, there was one circumstance that seemed to offer opportunity for self congratulation. Traffic accident fatalities decreased.

Most of us, I think, were under no illusions as to some of the reasons for the decrease. It was not that either as motorists or pedestrians we had grown wiser, or more cautious. It was simply that, due to gasoline rationing, there were fewer vehicles on the streets and roads, reducing to a corresponding extent the chances of the average citizen to be crushed to death.

It must not be supposed, of course, that even in 1944 the loss of life in traffic accidents was so slight as to justify complacency. Actually more than 24,000 persons were done to death that year, which is to say that if a tornado were to strike such a city as Jefferson City, Missouri, for example, and kill every man, woman, and child in it, the loss of life would be just about equal to the number killed on our streets and highways that year.

In any event, the hope of improvement in the statistical picture soon proved vain. In August, the month the war ended, traffic fatalities increased by 26 percent over those of the corresponding month in 1944. In September the increase over September of the previous year was 40 percent, in October, 53 percent, and in November, 40 percent again.

These increases were so alarming that when they were called to the attention of the President, he forthrightly demanded action to curb this holocaust which threatened to reach, or even surpass, in this first post-war year, the sickening record of 1941, the last pre-war year, when more than 37,000 lost their lives on our streets and highways.

I wonder if there ever was, properly speaking, a traffic accident. Webster defines "accident" as "an event that takes place without one's foresight or expectation; an undesigned, sudden, and unexpected event." I doubt if there ever was an automobile crash that could not have been foreseen, and which should have been expected whenever traffic rules are violated.

It was the President's desire that a conference* should be held in Washington at the start, or shortly before, the opening of the 1946 touring season. Accordingly, our preliminary policy committee suggested the three days of May 8, 9, and 10, which fall on a Wednesday, Thursday, and Friday, and these dates were approved by the President. The general conference will be held in the Interdepartmental Auditorium on Constitution Avenue.

The mayor or city manager, the chief of police, the school superintendent, the traffic engineer, and the street commissioner of all cities of 25,000 or more are among those being invited.

We are all familiar with certain types of local safety campaigns that have burgeoned in the past. Within a span of two or three days four or five persons are killed on the streets of a city, whereupon a popular clamor arises for an end to the slaughter. The police are alerted, a few traffic violators are heavily penalized and improvement temporarily is brought about. But within a few weeks public interest turns to other matters and vigilance is relaxed. The spasm method has never been effective, and never will be. We must have steady, unremitting pressure for safety, not for a week or two but throughout every day in the year, and it must be exerted in every community from the largest city to the smallest hamlet.

There are several promising recent developments. Chief Fred Roff of Morristown, New Jersey, who is president of the International Association of Chiefs of Police, tells me that police departments all over the country, which were depleted by the armed forces during the war, are building up again. Moreover, the new police recruits coming out of the army, most of whom have served as military policemen, are a superior lot. They have had excellent training in the army and as a result the training period for civilian police work can be considerably shortened.

That the people as a whole can be conditioned toward safety in city traffic is demonstrable in such a city as Houston, where crossing the street against a red light is almost unheard of. By contrast, we have New York City where no pedestrian pays the slightest attention to traffic lights.

Another development is the study now being made by your association, looking toward the standardization of street and highway markers and directional and warning signs. Ambiguous, obscure, and conflicting highway directions apparently provide a problem not peculiar to the United States, as I recently read in *The Times of London* a letter from an irate British subscriber who complained that in driving sixty miles through fog he encountered no less than nine different kinds of lane markings. When I mentioned this the other day, Herman MacDonald spoke up and said, "That's nothing; we have 29 different kinds of lane markings in this country." Well, that's something we are going to do something about.

Now, I am not naive enough to suppose that the President's conference alone can solve our whole problem. But it can and will integrate our efforts, disseminate approved techniques, and revitalize our program. I cannot undertake to predict what the conference will recommend. It has been suggested that the national conference might well be followed by a governor's conference in each state to translate the national program into terms applicable to every county, township, and hamlet in the country.

From an address before the American Association of State Highway Officials, Oklahoma City, Okla., January 1946.

* President's Highway Safety Conference. See page 147 of this issue.

New Parking Meters in Oregon City

THE reason for the installation of parking meters in Oregon City, Ore., is to increase the parking turnover in the business districts, which was not sufficient under the old parking plan. The decision to install meters was reached at about the time the war started but, due to factories going into war production, we were unable to obtain meters. Public opinion was carefully canvassed before this decision was made and the business people are heartily in favor of meters, though they are not too popular with out-of-town people. No schedule has yet been worked out for checking. We have 400 meters and may require 800.

C. A. Blodgett
Chief of Police
Oregon City, Ore.

America's Favorite Meter . . .

Duals-2to1

There's a Reason—

WHEN 166 cities across prewar America installed 71,393 Dual Automatic Parking Meters, it wasn't because Dual was the only meter on the market. Their choice was based on dependable service and minimum maintenance resulting from the sound Dual engineering principle. This installation record topped that of any other two makes combined.

Today wide awake communities, taking steps to control increased postwar traffic, are turning to Dual Automatic Parking Meters to help solve parking problems efficiently and economically. Dual is ready to serve with new meters which combine past performance with the latest improvements in design and construction.

Motorists, merchants, police and city officials join in giving their enthusiastic endorsement to Dual Automatic Parking Meters because they are simple to operate, economical to maintain, easy to install.

For complete information send today for the attractive free booklet —"Metered Parking—Today's Answer to Tomorrow's Traffic Control Problem," or ask Dual engineers to help you survey your community needs.

THE DUAL PARKING METER COMPANY

HARTER BANK BUILDING, CANTON 2, OHIO

When it Comes to Controlling Parking....

You can do it better with DUALS

Good Transit Makes Cities More Liveable

By G. W. WILSON
Manager, Transportation Division
General Electric Company
Erie, Pa.

THE MASS production of low-cost automobiles has raised our standard of living—has given people freedom of movement and access to pleasures of which our forefathers never dreamed. But in our cities, where space is limited, it has introduced traffic congestion that is slowly strangling our downtown business life.

So many people now own automobiles that the national riding average is only 1.75 passengers per car. This means in effect that the average automobile passenger has blown himself up to more than half the size of an automobile insofar as the use of street space is concerned. Put in another way, when a person drives downtown in his car, he requires 500 square feet of space instead of the 10 he used as a pedestrian.

We are now at the point where we must either stop talking and playing around with this traffic problem and really do something about it, or face the economic strangulation of the downtown congested areas. Currently, there are two schools of thought for remedying this intolerable situation:

1. Expand the city street space until it will accommodate everyone who wants to ride in an automobile.

2. Use existing streets more efficiently by cooperation of citizens in more general use of mass transit vehicles.

Presented at the press premiere of the General Electric movie "Lifestream of the City."

This talk we hear from the first school of thought about expressways, freeways, and broad boulevards would lead us to believe that our downtown areas are elastic and can be expanded and contracted at will like a rubber band. Actually, our downtown areas are permanent structures of concrete, stone, and steel and represent long-term investments worth billions of dollars. While all of us enjoy thinking how nice it would be for everyone to drive his car downtown—economically, such an idea is pure fantasy.

We believe that the second method, cooperating to use existing street space most efficiently, is the only practical method yet devised. Morever, it should be easy to sell to city dwellers, for they came to the city to enjoy more abundant living by cooperating with their neighbors. City dwellers already cooperate on the use of such things as lights, gas, parks, streets, and sewage systems for the benefit of the majority. Consequently, these things of better living not only cost less to use and operate, but they also enhance property values and attract business. No one would think of digging his own well in his backyard in the city, yet everyone still insists on having his own private transit system.

The subways, the street car, the trolley coach, and the bus use street space seven times as efficiently as the automobile, to say nothing of completely eliminating the parking problem. In a public-transit vehicle, one person uses 70 square feet of street space, as compared to 500 square feet in an automobile.

Four years of wartime restrictions on private automobiles proved that public transit can do an admirable job of keeping the cities' lifeblood flowing, and the job can be done much more to the public's liking when adequate and more modern equipment can be obtained.

A good transit system is one that is used in preference to private cars to reach the business district

Factors in Chicago's Transportation Problem

THE transportation problem of Chicago is both chronic and acute, and unless correctly solved the whole future development of the city will be adversely affected. Present proposals fail because such solutions as are advocated for some of the problems fail to consider the inter-relationship of all the elements and in some instances are either ineffective or harmful. Some of these elements are here enumerated:

1. Enlargement, improvement, and extension of Rapid Transit elevated and subway lines.
2. Modernization and extension of street car system.
3. Modernization and extension of motor bus transportation systems.
4. Railroad service, depots and terminals, together with convenient and adequate transfer to local transportation facilities for suburban lines, and through lines.
5. Downtown railroad loop connecting all downtown railroad stations, for use of all suburban lines.
6. Inter-urban and long-distance buses, with convenient stations.
7. Taxicabs—regulation as to number, stations, and operation.
8. Proper parking facilities at the outer ends of Rapid Transit and suburban lines and at intermediate stations where seats on public carriers are available.
9. Street traffic regulation, including development of one-way streets and coordinated traffic lights.
10. New streets opened by reason of solution of other problems, particularly railroad terminals.
11. Elimination of highway bottle necks.
12. Super-highways.
13. Airports with satisfactory local transportation to the downtown area.
14. Trucking regulations, including modern exchange arrangement with railroads and off-the-street truck terminals.
15. Water-borne traffic, for lake transport and particularly for growing traffic from the Great Lakes to the Gulf.
16. Terminal markets and food terminals.

JAMES H. SAWYER
Chairman, Local Transportation Committee, City Club of Chicago

The Beautiful Intersection

for Your Public and Your Budget

You can save lives, property, and your budget

● **WITH PRISMO REFLECTIVE PAVEMENT MARKINGS**

Prismo Life-Line is the striping product you're looking for . . . a complete service which offers: a semi-plastic glass binder, crystal-clear glass spheres, dispensing equipment engineered for long-lasting reflective lines, visible E-V-E-R-Y hour of the day and night. Get the details in the new, attractive Bulletin 461.

● **WITH PRISMO REFLECTIVE HIGHWAY SIGNS**

easily and economically made with the Prismo Sign Kit. The most economical sign reflectorization available today — long-lasting — low cost—high in angular visibility. Buy a Prismo Sign Kit to make and install your own Prismo Signs in your city. It's easy! You'll like it! See our Bulletin 244. Write for your free copy.

PRISMO SAFETY CORPORATION
HUNTINGDON, PENNSYLVANIA

PRISMO

Philadelphia Traffic

(Continued from page 112)

The next move was to set up a program and present it to the Mayor and City Council at a special meeting. Here, to the astonishment of the Committee, the Councilmen insisted there be no timid measures and proceeded to authorize a parking ban on nineteen North-South streets as well as on Chestnut and Walnut.

On December 28 all Philadelphia papers carried a sizeable advertisement of the new traffic regulations. Perhaps the Committee need not have done this, for the newspapers by then were treating the subject as first page news and were drawing up their own diagrams of the affected streets.

As of January 2 extra traffic police were assigned to the central business district. They were at every corner and even in the middle of blocks and, aided by such show of strength, they made the new rules work immediately.

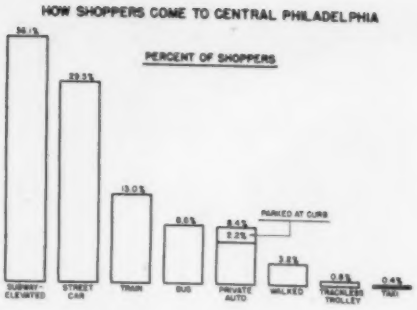
The public "caught on" and backed up the police, even to the extent of crying "shame" at violators. Now the policing is more nearly back to normal, but the streets remain remarkably free of violators—and traffic really moves!

Motor cars, trucks, and taxis currently run through central Philadelphia in half the time formerly necessary during periods of peak traffic. Cab stands no longer exist on Chestnut Street during the no parking hours, but taximen are far too happy with their new freedom of movement to protest.

Now in the morning rush hour there are nearly always three lanes moving on narrow Chestnut Street. Previously one frequently found only the middle lane available, as the right curb generally would be fully blocked and the left curb partially blocked with parked vehicles. The ease with which traffic now moves in mid-town Philadelphia has caused a wave of envy to rise in other congested business districts of the city. Merchants on Arch Street have petitioned for a parking ban and the Bureau of Traffic Engineering has received similar demands from West Philadelphia and Germantown.

A Boon to Public Transit

The Traffic Department of the Philadelphia Transportation Company made checks on operating conditions in the mid-city area late in December and then again following establishment of the new regulations on January 2, 1946. This before-and-after survey revealed that the time necessary to cross central Philadelphia on a streetcar, bus, or trackless trolley has been reduced by from 15 to 20 percent.



More important, however, is the marked improvement in smoothness of service. Now one seldom sees those traffic tie-ups which formerly were so common and which during the peak hours would cause five or six streetcars to bunch up in a row. As a result, passengers are distributed evenly instead of concentrated in the first one or two cars of the bunch.

Also, there is now a greatly reduced number of "turn-backs" formerly caused by irregular loading and poor spacing. Thus, on the Chestnut Street route, PTC has practically stopped using 10th Street as a turn-back point and has greatly reduced turn-backs at 6th Street. During the morning and evening traffic peaks, East Philadelphia and Front Street get service every two minutes, whereas such service was formerly reduced at times to ten-minute intervals. In addition, customers are now seldom left standing at corners in the central city area as happened all too frequently in the past.

There has been a 12 to 15 percent average speed-up of operations on Chestnut and Walnut Streets. But major improvement along these east-west arteries has been recorded at over 20 percent during the mid-afternoon period of 2:00 to 4:30 p.m. when general street traffic is at its heaviest. A faster movement on north-south streets has been particularly noticeable; for example, on heavily-traveled trackless trolley Route 61 the decrease in running time from Arch to Walnut Streets as a result of the parking ban was found to be as follows:

DECREASE IN RUNNING TIME FROM ARCH TO WALNUT STREETS

	8th Street	9th Street
8:00 to 10:00 a.m.	16.7%	8.4%
10:30 to 1.00 p.m.	23.3	23.3
1:00 to 4:30 p.m.	30.7	12.4
4:30 to 6:00 p.m.	12.4	19.5
Average	21.0%	21.0%

The reversal of traffic direction on Sansom and Locust Streets has also proved a sound move. Before January 2 there was a traffic bottleneck on Walnut at 18th Street caused by an influx of *westbound* Locust Street traffic turning north at Rittenhouse Square. The nightly jam-up at this point is now a thing of the past. Thus, the reversal of street direction on Locust has accomplished it main purpose and appears to have been accompanied by a minimum of inconvenience.

A preliminary report indicates that there has been a decrease of 15 percent in frequency of accidents since inauguration of the new rules. In the past a high proportion of accidents and delays on PTC lines was due to inexperienced and inattentive motorists pulling into and out of parked spaces at the curb. This type of interference with the operation of public transit at the surface level is now greatly reduced in the business district.

Summary

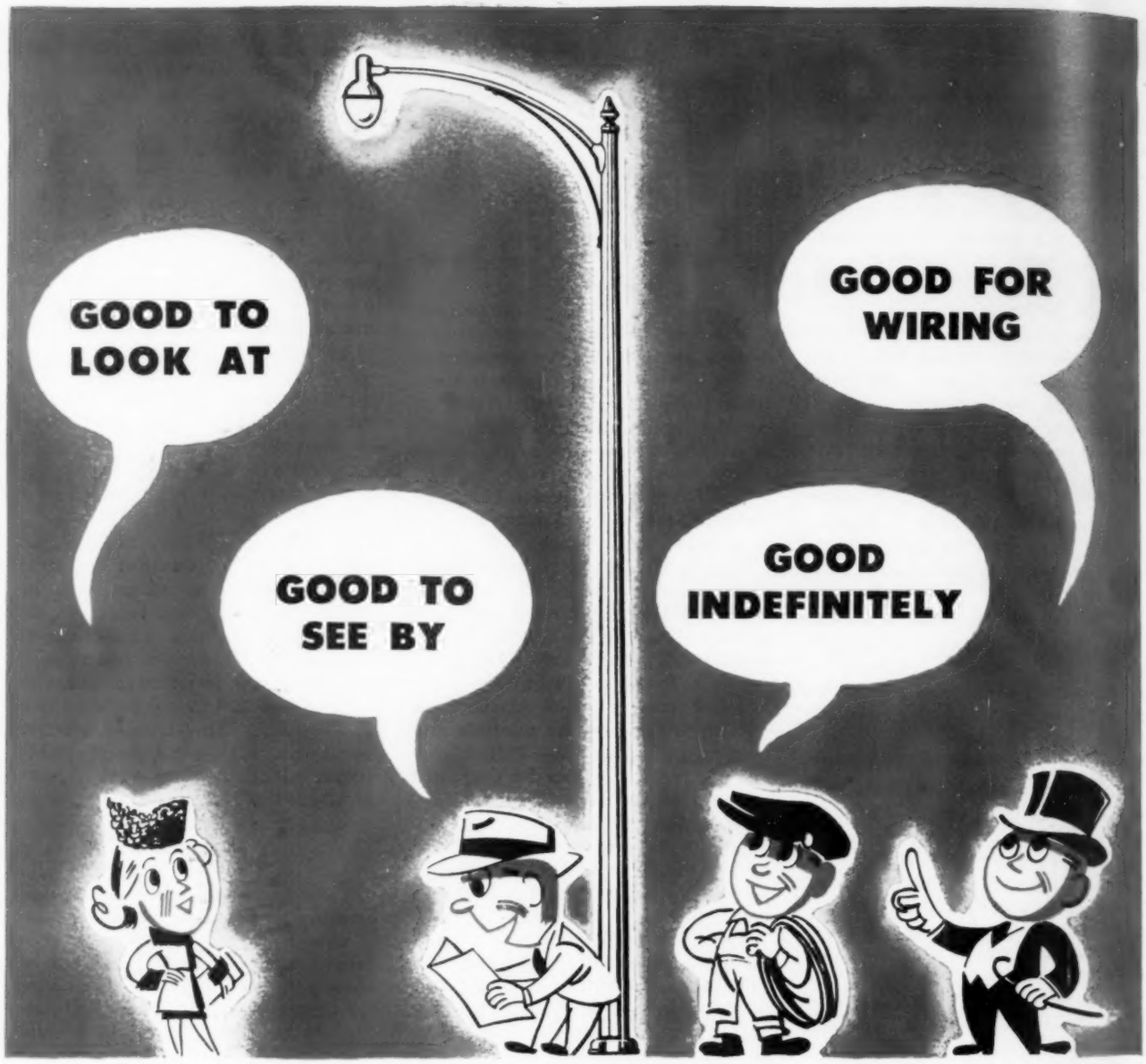
These many indications of all-around improvement in traffic conditions make it virtually certain that the new regulations, now on 90-day trial, will become permanent. Traffic light timing on Chestnut and Walnut Streets has already been stepped up in keeping with the faster pace of traffic. Signals formerly synchronized for speeds of 12 to 16 miles per hour have been set to a range of 15 to 18 miles.

Stimulated by the success of the mid-city parking ban, City Council has given $20,000 to the Philadelphia Committee for Relief of Traffic Congestion for a study of off-street parking.

I.E.S. Lighting Handbook Will Be Ready Next October

WITH nine contributions for the forthcoming I.E.S. Lighting Handbook in actual preparation, and a draft of the first section already under study by members of the Handbook Committee, the extensive program for publication of the comprehensive work is already well under way, according to Robert W. McKinley, Handbook Editor.

In December, an 18-page "Contributor's Guide" was sent to sixty prospective contributors. The handbook is scheduled for release in October 1946. Long contemplated by the Society as a major post-war project, it will contain five hundred pages of text prepared by outstanding authorities in their respective fields, and a manufacturers' reference section of two hundred pages. The sixteen sections will cover every phase of lighting, from the pure physics of light to specific lighting recommendations for stores, offices, homes, factories—even for juke boxes and television studios.



THINK *first* of Union Metal all-steel tapered street lighting standards when planning improved street lighting for your community.

Here's why: (1) Union Metal street lighting standards are designed by engineers of long experience to conform to all requirements of good street lighting practice. This means they give you most light for your money. (2) They're all-steel and cold-rolled for extra strength and extra long life. (3) Their tapered, streamlined design makes them pleasing to the eye, an attractive addition to any community. (4) With the new 45-degree upsweep bracket, they're easy to wire, simple to maintain. (5) Anywhere you go, in small towns or large cities, they're the *standard* of good lighting.

For complete details, contact your electric utility company, or write The Union Metal Mfg. Co., Canton 5, Ohio.

UNION METAL

Largest Producers of Street Lighting Standards

Modern Street Lighting System Planned for Syracuse

Modern pendant luminaires 25 feet high recommended to replace arc lights and upright units

By W. F. KAVANAUGH
City Traffic Engineer
Syracuse, N. Y.

PROVIDING for illumination of streets during hours of darkness promotes, probably as much as any single function of city government, the safety, comfort, and convenience of the citizens of a municipality.

Experience in Syracuse bears out this statement. In 1932, at the depth of the last depression, a number of street lights were turned off with the idea of cutting expenses. Increase in crime, traffic accidents, and inconvenience during hours of darkness soon brought a public demand for resumption of use of the lights that had been discontinued. In 1936 improved lighting was installed on seven streets. Police records show that in the ensuing year there was, on these streets, a decrease in night accidents of 23 percent, while for the same period day accidents increased 22 percent.

The same experience had been duplicated throughout the nation. Wherever improved lighting has been installed, the number of night traffic accidents and fatalities has decreased and the night crime record has improved.

Federal Department of Commerce statistics indicate that the cost of liability insurance and death claims amounts to considerably more than the cost of street lighting. Good lighting by preventing accidents causes reduction in these costs as well as in doctor and hospital bills. It would seem good judgment, therefore, from both an economical and a humanitarian point of view, to bring our street lighting system up to modern standards.

The standards generally accepted in this country are these established by the Illuminating Engineering Society:

REQUIREMENTS FOR SAFE STREET ILLUMINATION

Street Classification	Footcandles on Street between Curbs		Night Traffic Cars per hour
	Average	Minimum	
Very light traffic	0.2	0.02	Under 150
Light traffic ...	0.2	0.05	150- 500
Medium traffic .	0.4	0.1	500-1,200
Heavy traffic ...	0.8	0.2	1,200-2,400
Very heavy traffic	1.2	0.3	2,400-4,000
Heaviest traffic .	1.5	0.4	Over 4,000

(Intensity of moonlight is 0.025 footcandles)

Lighting on a large percentage of the streets of Syracuse will not approach these standards. This is true of streets in all traffic classifications, particularly so of those in the heavy traffic and residential classifications.

Present Lighting Systems

At the end of 1945, the street and park lighting system consisted of the following:

Underground Feed—Magnetite Arc Lamps

385	twin, upright
667	single, upright

Incandescent Lamps

171	10,000 lumen pendant
254	10,000-lumen upright
245	6,000-lumen upright
20	6,000-lumen pendant
1,188	4,000-lumen upright
321	2,500 lumen upright
167	2,500 lumen viaduct
63	4,000-lumen viaduct

Overhead Feed—Incandescent, pendant

4,079	2,500 lumen
74	4,000-lumen
211	6,000-lumen
228	10,000-lumen
9	10,000-lumen
3,481	units undeground feed
4,601	units overhead feed
8,082	units total

Efficiency of Pendant Types

Of these units, those of the pendant type are, generally, more efficient than the upright type, which are used in connection with ornamental poles. The more recent installations of pendant fixtures are up to modern standards. Some of these on iron poles are in use on heavy traffic streets. The larger percentage of pendants are on wooden poles and are used to light residential sections. There are a number of areas where residential street lighting is deficient.

New Lighting Recommended

Where residential streets are used as bus routes, it is recommended that a higher level than the residential standard for lighting be installed. Approximately 1,000 additional lights are necessary to bring residential streets, bus routes, and industrial sections up to minimum lighting requirement standards. The yearly charge at current prices for these additions would be about $26,000.

On strictly residential streets, there are, generally, sufficient lights to meet the minimum standards. On the heavy traffic streets, a considerable amount of illumination is diffused upward, when it should be directed onto the pavement and sidewalk. Only 15 to 20 percent of the light output of an upright luminaire reaches the pavement, whereas over 50 percent of the light from a modern pendant unit is directed downward.

Efficient Control Needed

On Erie Boulevard and South Salina Street where single luminous-arc units are in use, there are enough lights which, if controlled, illuminate these streets according to accepted standards. There is, however, no economical way of controlling the light properly from this type of unit.

Some of the heavier traffic streets are lighted by upright units using 4,000, 6,000 or 10,000-lumen incandescent light bulbs. With these units as with the arc units there is no way of distributing the light efficiently. Most of the light is directed upward. This creates a serious situation, particularly where 4,000-lumen lights are used to illuminate a heavy traffic artery as, for instance, the upper part of West Genesee Street.

In the downtown business area and on sections of North and South Salina Streets outside this area, lighting units in use are twin luminous-arc fixtures, with the same lack of light control. As a consequence, although twin lumin-

afres are used on each pole, pavement and sidewalk lighting is below minimum standards on the wider streets.

When luminous arc lights were first installed in Syracuse streets within the last quarter century, they were the last word in street lighting. Subsequent development of high-wattage incandescent bulbs and other light sources controlled by reflecting and refracting devices, have made the arc light obsolete. Besides, the arc lighting equipment is wearing out. There are frequent outages. Difficulty is experienced in obtaining necessary maintenance parts. In the near future the arc light fixtures must be replaced by modern luminaires.

Replacement should start on heavy traffic streets. Pendant fixtures with light centers approximately 25 feet above pavement surface are proposed. Intensities of illumination should conform to the latest standards of the Illuminating Engineering Society.

Mercury or Incandescent?

The height of the light center of the trial units in the 100 and 200 blocks of South Salina Street is 25 feet 2 inches. This is recommended as a good height for proper diffusion of light and elimination of objectionable glare. Measurements taken indicate that the luminaires at this location now in place, using a mercury vapor light source, give about two and a half times as much light on the pavement as do the twin-arc lights on this street. This may possibly be further improved by use of a different type of globe. When the mercury-arc lamps have had further test under cold weather conditions, incandescent lamps will be substituted for testing as to intensity, diffusion, etc. Decision as to which type of light source should be used will be made when both kinds have been properly tested.

Lighting Assessment Opposed

Most of the so-called ornamental lighting, that is lighting units with iron poles, was installed under a charter provision that at least 50 percent of the cost of the special lighting shall be assessed against the abutting property. In 1940, an amendment was passed changing the assessable percentage to not less than 25 percent. No changes in assessment were ordered under the amendment. Protests against the special street lighting tax are increasing yearly. Syracuse is one of the few upstate cities that still retains such a tax.

It seems reasonable that the city-at-large should assume the cost of lighting all streets according to residential or traffic classification. If a group of property owners or business men wished more elaborate lighting than the general plan proposed, it would be fair that the extra cost be assessed against the benefited property. It does not seem equitable, however, that property owners should be assessed additionally for special lighting that was installed, not at their request, but because traffic conditions necessitated better lighting than would be required on a residential street. Collections from special lighting assessments amount to about $93,000.

Along with the improvement of Erie Boulevard, which is scheduled for early start under the state program, it will be necessary to install an efficient lighting system. At present this thoroughfare is very poorly lighted. Oswego Boulevard which is also high on the state list for early reconstruction will also require a new lighting system.

When other parts of the proposed state arterial system are improved, both on existing and new right-of-ways, adequate lighting systems will have to be installed along with pavement construction.

$350,278 for Street Lighting in 1945

Under the contract with the power company which expired February 26 and all past contracts, title to all street lighting fixtures and equipment rested with the company. The arrangement seems satisfactory provided that reasonable rates are established for street lighting.

In designing street lighting systems only the most modern equipment should be considered. A survey of manufacturers indicates that no startling developments are to be expected in the near future.

America's Lighting Needs Surveyed

A MINIMUM of 4,000,000 new luminaries or light fixtures for approximately 50,000 miles of automotive thoroughfares and 250,000 miles of residential streets at an estimated installed cost of $500,000,000, will be needed for new and replacement traffic safety lighting in the United States during the next ten years, according to a recently-completed survey of America's lighting conditions made by A. F. Dickerson, manager of General Electric's Lighting Division in Schenectady, N. Y.

The survey points directly to improper illumination as the chief reason why two persons are killed in night accidents for every one killed in daytime accidents.

The estimated need for the next ten years is based on survey findings that most accidents occur on four percent of 500,000 miles of designated highway and on 10 percent of 300,000 miles of city streets. These percentages, representing 20,000 and 30,000 miles respectively, total 50,000 miles of needed lighting of various types and strengths. In addition, practically all lighting on residential streets badly needs modernization, Dr. Dickerson claims.

Five main items making up the total estimate are as follows: 400,000 new fixtures at $80,000,000 for 5,000 miles of business streets; 1,000,000 new fixtures at $150,000,000 for 25,000 miles of traffic arteries; 500,000 new fixtures at $90,000,000 for 5,000 miles of freeways, or over and under pass superhighways; 600,000 new fixtures at $80,000,000 for 15,000 miles of highways, mainly the approaches to cities and highways through villages; and 1,500,000 new fixtures for residential streets.

Such a schedule of new lighting could double the existing number of main thoroughfare luminaires or light fixtures in the country, Dr. Dickerson says.

An Urgent Need

From December 7, 1941 to June 1, 1945 there were three auto accident casualties for every American war casualty, 1,012,000 being killed or wounded in battle and 3,200,000 being killed or injured in traffic accidents during this period. This situation existed despite severe curtailment of automotive traffic during the war.

As an illustration of the effect of improper lighting, the survey offers statistics for Manhattan in New York City during its dim-out period. In the years 1941 and 1942, fatal day crashes went from 124 down to 89, while fatal night crashes soared from 167 to 276.

Detroit, said to be the best lighted city in the world, is cited as an example of proper lighting. Here, in a similar period of eighteen months before and after inception of a new lighting program on 31 miles of streets, the traffic death toll at night was reduced from 58 to 18. In the same periods correspondingly, daytime traffic deaths increased from eight to nine.

In New Jersey, under a state aid program which provided traffic safety lighting for 177 city highway streets, 940 state-county intersections, and 113 miles of continuous highway, night accidents were reduced 38 percent and night fatalities 76 percent during two years following the improvement.

Hundredth Anniversary of the Birth of George Westinghouse to Be Observed in October

GEORGE WESTINGHOUSE, whose hundredth anniversary will be observed this year, has already taken his place among the great figures in our national history. Born on October 6, 1846 in Central Bridge, N. Y., Westinghouse has been closely associated not only with the building of a great business concern, but also with industrial expansion and development in the United States generally.

When Westinghouse entered the electrical field in 1885, electricity was mainly employed to operate the telegraph, the telephone, and primitive lighting systems. Only direct current was used, and a direct current station could not economically supply a territory greater than sixteen square miles.

He developed the transformer after acquiring the patents of Gaulard and Gibbs, which ushered in the age of electrical transmission and electrical energy—and he organized the Westinghouse Electric Corporation.

At Great Barrington, Vt., on the night of March 20, 1886, a switch was thrown and the village glowed with light from the first alternating current transformer system ever installed in America. The event calls to mind the gala night 52 years later (on September 29, 1938) when Greensburg, Pa., turned on its 100% relighting installation to the tunes of twenty brass bands and the exuberance of the thousands of citizens and visitors. Greensburg's lamps are 500 and 1,000 candlepower. Great Barrington's were 150, 50, and 16 candlepower.

Lights the 1893 World's Fair

Within two years after the demonstration in Great Barrington approximately one hundred Westinghouse-built alternating current plants were successfully operating in America; but opposition was still formidable. Westinghouse considered it imperative to dramatize, in some vivid and spectacular way, the revolutionary new system which he and his staff were perfecting.

The opportunity came when bids were invited for lighting the great Columbian Exposition, or Chicago World's Fair, in 1893. Westinghouse won the contract with a bid that resulted in an ultimate saving to the Exposition of more than a million dollars. However, he faced a tremendous problem. The fair would open exactly eleven months and eight days from the date on his contract. Moreover, the rival Edison interest held a secure patent on the only practical lamp then available—the one-piece type now in universal use. A non-infringing lamp would have to be found—and found quickly—if the contract terms were to be met.

Westinghouse boldly set to work to produce one (an undertaking in which many able men had failed) and in an incredibly short time perfected the "stopper" lamp—so called because a piece of ground glass, holding an iron filament, fitted into the bulb like a cork. Non-infringing because of its two-part design, it served its temporary purpose well. And to crown the achievment, Westinghouse rushed through extensive new production facilities, including a complete glass factory, in time to flash 250,000 "stoppers" at the moment the fair was scheduled to open.

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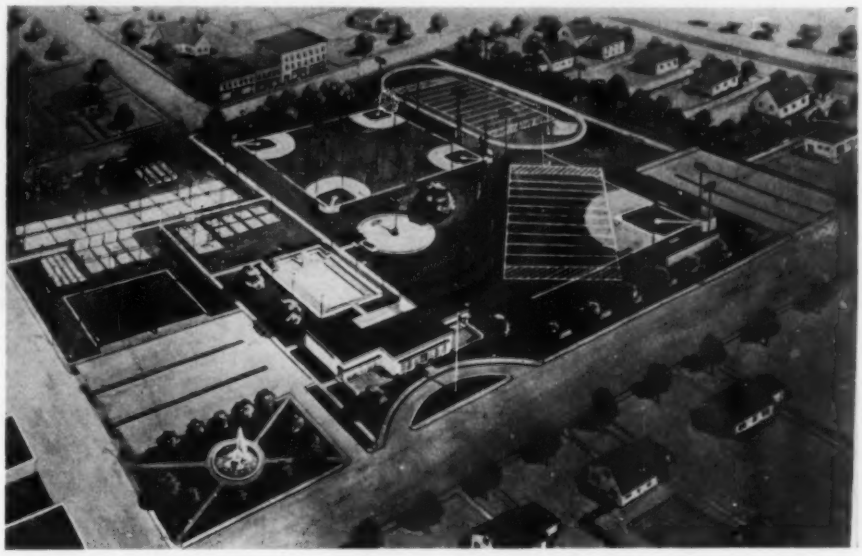
Organized Recreational Facilities for a City of 50,000



Drawing furnished by G.E. shows possible lighting installations on recreation field

KEEPING pace with the modern trend for night-time illumination of athletic fields and recreational areas, this drawing by E. F. Lumber of General Electric's Lighting Division shows how city planners might develop such a community center. Included in this suggested layout are tennis, badminton, and handball courts; baseball, football, and track fields; a swimming pool, bowling alleys, horseshoe courts, and a skating rink. Illumination for all these facilities is incorporated in the plans.

The idea behind the illuminated community center, says R. J. Swackhamer, G-E's sports lighting expert, is for cities to develop such a program on a fund-allowance basis, starting with the community recreational building to promote city-wide interest in the proposed project. The drawing is based on twenty acres of ground and is suggested for cities with approximately 50,000 population. Larger cities would require two or more of such developments.

Kansas City, Missouri

This city's carefully designed 5-year plan to relight 164 miles of streets will be described here in the April issue of THE AMERICAN CITY by Traffic Engineer T. J. Seburn.

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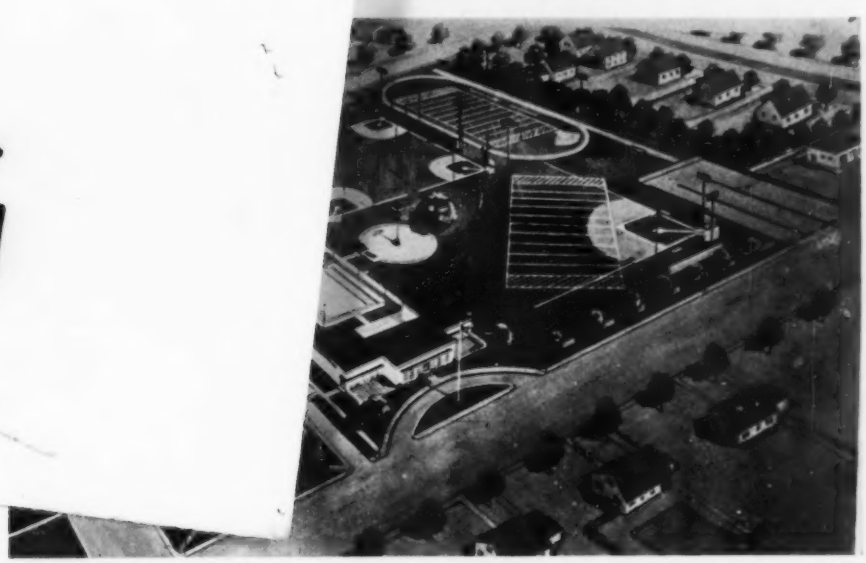

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An Improvement the Voters Can See

TODAY good street lighting is so much a part of good living that no one who owes his present or future position to the will of the people should overlook its tremendous potentialities.

The attention which was focused on gloomy streets by wartime brownouts; the appalling rise in nighttime traffic accidents which has followed so swiftly after peace; the increasing public clamor for better living conditions 'round the clock... all call for municipal action.

If your town is not already among those progressive communities that have inaugurated programs of street lighting improvement, two simple steps are immediately indicated.

First — have a thorough survey made of your current and anticipated needs.

Second—with a program based on the findings of such a survey, go before your town council and point out how adequate street lighting pays big dividends in reduced accidents, fewer crimes, greater civic pride, higher real estate values, and greater retail activity.

You'll find it's just as easy—or easier to gain support for adequate street lighting as it is for other civic benefits . . . *and good street lighting is an improvement the voters can see!*

The Street and Traffic Safety Lighting Bureau, 155 East 44th Street, New York 17, N. Y.

GOOD STREET LIGHTING—THE SIGN OF A GOOD PLACE TO LIVE

A Survey of Competitive Bidding Procedures

By NELSON ROSENBAUM
Assistant Corporation Counsel
City of New York

Last December, at the Annual Conference of the National Institute of Municipal Law Officers in Washington, D. C., the writer read a report entitled "A Survey of Competitive Bidding Procedures." It was based on information furnished by city attorneys, state highway departments, and public housing authorities. The purpose of this investigation was to learn the various procedures used and any problems existing in awarding public contracts by competitive bidding.

While the complete report is available it is believed that this summary of its contents will be of interest to municipal officials.*

* Municipalities and the Law in Action" (1946 Edition) published by the National Institute of Municipal Law Officers, 730 Jackson Place, Washington 6, D. C.

Size of Contracts Required to Be Awarded by Competitive Bidding

CONTRACTS of over $500 or $1,000 are generally the starting points at which competitive bidding begins. Instances exist of extremely low starting points for competitive bidding by advertisement, as in Norfolk, Va., on construction contracts of over $100.

Among the large cities, great variation exists in the starting point of competitive bidding with newspaper advertisement; e.g., Philadelphia starts at more than $500; Los Angeles at $2,000; Kansas City for supplies, materials and equipment starts at $2,500 or more; while New York City uses this procedure on contracts of more than $1,000.

Berkeley, Calif., is mentioned as having recently increased its starting point for competitive bidding to over $1,000. The reason advanced to the voters on the local referendum for the change was that "the cost of merchandise and materials has increased to such extent that very little work can be performed or supplies purchased for $500" and "that the administration of the city could operate more efficiently if" competitive bidding started on contracts of over $1,000.

Competent authorities on public procurement recommend that only contracts of over $2,000 (some suggest a higher figure) should be awarded on competitive bids after newspaper advertisement, because advertisement of this kind is a costly and an unsatisfactory means of securing competition, especially on small contracts where bids are often obtained only by direct solicitation. The risk of favoritism can be forestalled, they argue, if competition is had on all contracts.

Kansas City, Mo., is seems, has adopted these ideas by requiring competition on all merchandise purchased, with requests for bids publicly posted at least two days on all contracts, including those not awarded on newspaper advertisement. In New York City, contracts of $1,000 or less are awarded "to the lowest responsible bidder upon bids submitted without advertisement" under regulations of the Board of Estimate. These regulations specify that requests for bids shall be made whenever possible to at least three persons regularly engaged in the business of the item sought, with bids from unsolicited bidders considered in making the award.

Bids can be secured without newspaper advertisements by (1) solicitation from a stated minimum of those regularly engaged in the business of the commodity, work, or service required, or (2) publicly posting a notice a stated number of days in the office of the procurement agency that bids will be received. A posting of at least two days should be the minimum.

The conclusion on this point is that in the interest of efficient municipal operation, since the trend of rising prices exists, the upward revision of the amounts at which competitive bidding by newspaper advertisement begins should receive prompt consideration, and that such a revision would facilitate the making of contracts of nominal amounts. Possible favoritism where newspaper advertisement is not required, it is suggested, can be obviated by soliciting bids or by publicly posting notices for bids as mentioned above.

Statutory Authority for Municipalities to Waive Competitive Biddng

In many cities, the local governing body does not have authority to waive competitive bidding ordinarily required, except when an emergency exists affecting the life, health, and property of the community. However, the need for waiving competitive bidding occurs when because of the nature of the work or other circumstances, it is impractical or unsuitable to contract by competitive bidding. Power, therefore, should be lodged in the local governing body to dispense with this requirement. Some statutes authorize the waiver of competitive bidding usually by more than a majority vote of the local governing body. This authority is not given for the purpose of allowing the local governing body to repeal the provisions for competitive bidding entirely. Each specific contract upon which competitive bidding is to be waived should receive the deliberate judgment of the local governing body.

The following suggestions were made on this point: That inasmuch as the price in an agreement made without competitive bids may be inflated, statutory provision should be made that it is not to be paid until the contract is performed and unless the local auditing authority certifies that such price is reasonable and just. The statute should state also that, if the amount claimed is in excess of the amount audited as previously mentioned, the contractor, if he sues, must establish the fair and reasonable value of the contract item and that the price stated in the contract is not to be admitted in evidence as a promise to pay such sum. This means that a contract made without competitive bidding creates a liability only for the fair and reasonable value of the contract item. If the local auditing authority is not an elected public official responsible to the voters, the auditing should be done by the local governing body, which is directly responsible to the local electorate.

Criteria Used for Awarding Contracts at Competitive Bidding

The discretionary standard for awarding contracts at competitive bidding, such as the "lowest responsible bidder," and "lowest and best bid-

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Typical Motorola transmitting and receiving unit as installed for Miami Police Department.

A standard mobile transmitting and receiving unit in use by Michigan State Police.

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der," which considers all the factors relating to a bidder's capacity to satisfactorily perform the contract, appears to predominate over the standard of the lowest bidder, which implies that the award, if made, must go to the lowest monetary bidder.* The experience of cities with the discretionary award has been uniformly satisfactory. Some cities use both the discretionary and non-discretionary award, as, for example, "lowest bidder" for supplies and "lowest responsible bidder" for construction work, and vice versa. The report recommends that, inasmuch as the discretionary criterion secures a bidder for the lowest price with the best probability of complete and satisfactory performance, it should be the only one specified.

Administration Techniques Used in Applying the Discretionary Standard

The inquiry disclosed that in determining the responsibility of bidders, financial statements are obtained and general investigations are made of each bidders' reputation, facilities and equipment for doing the work, previous experience, performance records, ability to do the job, integrity, and other factors that relate to responsibility. In some states a bidder is required by statute to submit this information under oath when he submits his bid.

Techniques have been devised for assisting awarding officers in determining the responsibility of bidders. The Board Estimate of the city of New York has established a Board of Responsibility, consisting of the awarding officer, the Comptroller, and the Corporation Counsel, to pass upon the responsibility of a bidder who is about to be rejected as not responsible. Under this arrangement the awarding officer obtains the advice of the city's fiscal and legal officers, thereby reducing the possibility of an improper award.

Procedures Followed When the "Lowest Bidder" Is Rejected

The award on the discretionary standard is made on facts found after an investigation which tends to show that the rejected lowest bidder is not "responsible" or the "lowest and best bidder." It has been judicially suggested that, when the award is not made to the lowest bidder, "the ultimate facts upon which that action is based should be entered in the clerk's minutes for the information of the taxpayers."

Some public bodies do this. In some cities the individuals awarding officer files a report of the facts upon which he awarded the contract to one other than the lowest bidder. In Philadelphia, the City Solicitor secures a certificate from the awarding officer stating the facts and reasons why the contract was not awarded to the lowest bidder before drawing or approving the contract. This certificate is given careful consideration by the City Solicitor and care is taken not to trespass upon the discretionary powers of the awarding official to determine the lowest responsible bidder. This has been the practice since 1929.

In New York City when a contract is let by the awarding officer to one other than the lowest bidder, he must file in the office of the Comptroller and Treasurer a statement in detail of the reason therefor. Federal agencies observe a similar procedure under regulations of the General Accounting Office.

Similar practice should be adopted more generally. The practice will protect the awarding authority from unjust criticism, create better public relations, and thus strengthen the will to make the proper award of contract.

The City Attorney's Role in Competitive Bidding

The survey showed that many cities do not require their legal advisors to approve, before advertising for bids, the form of contracts to be awarded by competitive bidding.

Competitive bidding may be sprinkled with pitfalls all along the way. The danger commences with the first advertisement for bids. Before this point is reached the city's legal advisor should be in the picture to correct any defects and make certain that all steps taken are in accord with the law of competitive bidding. The city's legal advisor's approval of the contract as a preliminary to requesting bids will often obviate the making of an illegal contract or one subject to attack by a taxpayer.

A city's legal advisor's approval of the resolution of award or his drawing the contract after the award is not as effective as the requirement that he approve the contract before advertising for bids. For obvious reasons he should not be placed in the embarrassing position of having to pass upon the legality of competitive bidding after it has been completed. Furthermore, the drawing of a contract after the award can lead to favoritism, if the successful bidder is able to exert influence towards that end, and, if allowed, destroys the very basis of competitive bidding, to wit, the elimination of favoritism.

Pre-qualification of Bidders —Two Leading Decisions Discussed

The report recites that during the 1920's many state highway departments as a result of unsatisfactory experiences, by their own administrative rule established procedures for pre-qualifying bidders. This was done on the theory that the responsibility of a bidder should be determined before he is permitted to bid, so that a not responsible bidder is saved the expense of preparing a bid and an awarding officer is spared the unjust criticism of rejecting a low, though not responsible bidder.

The opponents of pre-qualification want every one to be allowed to bid, for they say pre-qualification of bidders limits competition.

The proponents of pre-qualification argue that public works should not be an experimenting ground for contractors, though newcomers are welcomed in the lower classification of work, and advancement to the higher branches would depend upon their performance records; that it checks contractors from over expanding and overloading themselves with too many contracts, avoids delays, defaulted contracts, and unwarranted law suits; that responsible contractors who refrain from bidding when anyone can bid are more likely to bid; that a low bid and a surety bond are not of themselves adequate qualifications; that it prevents the acceptance of a low bid from an incompetent contractor, which is likely to result in delay in the use of the improvement, delays to other work, lawsuits, and other troubles, such as inferior work with high maintenance costs, early decay or actual failure.

Public agencies using pre-qualification of bidders are eminently satisfied with it because it enables them to obtain contractors that are responsible and qualified.

The report contains a discussion of the two leading decisions dealing with pre-qualification of bidders (*Matter of Weinstein Building Corp.* v. *Scoville*, 141 Misc. 902, 254 N. Y. Supp. 384 and *Harris* v. *City of Philadelphia*, 299 Pa. 473, 149 Atl. 722.) The holdings of these cases may be summarized as follows: (1) that pre-qualification cannot be established by administrative regulation alone but must be authorized by statute; (2) where authorized

* "Tested Criteria for Lowest Responsible Bidder," THE AMERICAN CITY, February 1943, discusses the various factors to be considered in making the discretionary award.

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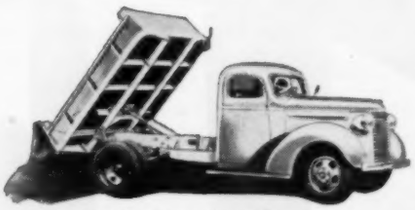

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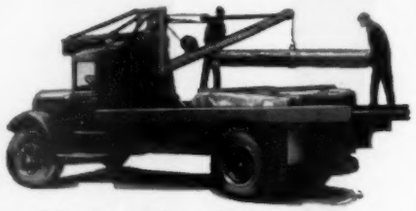
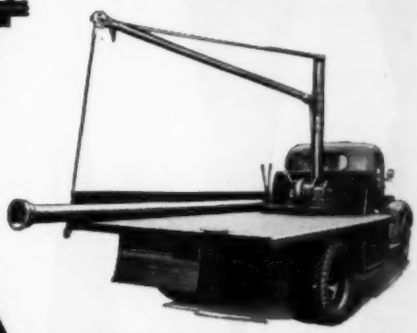


Telescopic boom Crane. Boom radius 8 to 20 feet.



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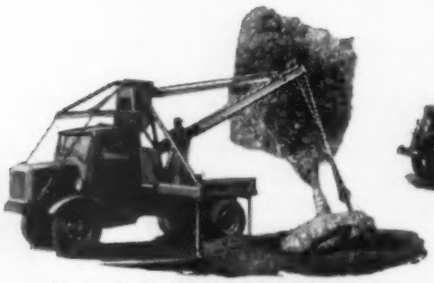
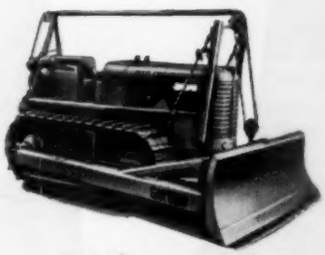


Crane Model 4812 for heavy parkway work.

Special Garbage and Rubbish Body on semi-trailer.



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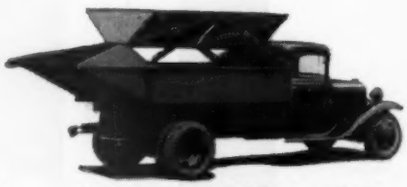
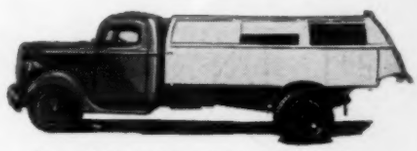


Type C28 scow end Garbage Body. Steel hinged covers extra equipment.

Street Flushers and Sprinklers.



Type C50 Garbage Body with sliding steel covers on each side.

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by statute the method of pre-qualification used must not permit the exercise of favoritism in the selection of bidders.

Some of the statutes providing for pre-qualification of bidders are cited and discussed, including the statutory devices used for preventing favoritism in the selection of qualified bidders.

Mandatory Separate Contracts on Public Buildings and Group Bidding

Some cities are forced to award four separate contracts for the construction, repair or alteration of a public building when the total expenditure exceeds a stated sum. These separate contracts are usually for (1) general construction,, (2) heating and ventilating, (3) plumbing, and (4) electrical work.

A great many cities are not obligated to award these separate contracts and in many instances expressed strong objections to them. Cities compelled to award separate contracts, in the main, appear dissatisfied. One city strongly favored the elimination of mandatory separate contracts because they are "contrary to the prevailing practice in private undertakings of magnitude, and . . . are unsound in principle. The coordination of the work of various sub-contractors can only be accomplished if all are under the control of one principal contractor responsible to the city for performance."

Federal agencies are not required to award separate contracts. The regulations of the Federal Public Housing Authority contain the idea of a single contract as the norm.

The argument advanced against these multiple contracts is that they prevent coordination of performance which can only be obtained when all contractors on a job are under the control and jurisdiction of a general contractor and that these multiple contracts, because of lack of team work among the separate contractors, result in delays with damages for such delays often successfully collected against public agencies by these non-coordinated contractors.

A measure toward the possible elimination of this divergency in these multiple contracts was introduced in the 1945 session of the New York Legislature (Senate Print No. 1702 and Assembly Print Nos. 1943, 2290). These bills failed to pass, but are likely to be reintroduced this year. They permit separate bidding by individual contractors who form a group or team with their performance coordinated by a general contractor, while at the same time permitting the submission of bids by the various separate contractors. The total of the bids of the lowest group bid is measured against the total of the lowest separate bids not on the group basis, with the award going to the lowest of these two classes. The successful bidders in either case obtain individual contracts from the public agency. This proposed group bidding is one step in the right direction as there exists a chance for coordinated performance if the group bidders get the award of contracts.

Contractors and Their Subcontractors

In this age of specialization the general contractor performs many items through subcontracts.

Two problems result from this situation: (1) the necessity of obtaining subcontractors that are competent and reliable to insure good workmanship; (2) the peddling of subcontractors' bids by the general contractors after award of contract to obtain lower subcontract prices, a practice which results in cheapened work and inferior performance.

Some cities solve the first problem by requiring the general contractor to submit to the contracting officer the names of subcontractors for approval before such subcontracts may be entered into.

The second problem has resulted in legislation in California (Sections 4100-4107 of the Government Code) providing that contractors on all contracts, other than certain specified ones, shall state in their bids (1) the name of each subcontractor, (2) the portion of the work to be performed by such subcontractor. A contractor's failure to specify any of the work to be performed by a subcontractor is an agreement by him that he will perform it himself. The contractor is forbidden, without the consent of the awarding authority, to substitute subcontractors, permit the assignment of subcontracts, or from subcontracting any work for which a subcontractor was not designated in the original bid. A contractor is permitted to subcontract any portion of the work for which a subcontractor was not originally designated only in cases of public emergency or necessity and then only after a finding reduced to writing as a public record of the awarding authority setting forth the facts constituting the emergency or necessity. Any violation of the foregoing is a violation of the contract so that the contract may be cancelled by the awarding authority with no recovery on the contract. It is further provided that the failure of a contractor to comply with any provision of this law is not a defense to any action brought against him by a subcontractor.

In Massachusetts there is legislation (Chapter 149, Sections 44A-44D of the General Laws) enacted under the heading "Fair competition for bidders on construction, etc., of public works" which permits the elimination of peddling of subcontractor's bids where such a condition exists and provides for the award of one general contract so that all the contractors on a project are under the control and coordination of a general contractor.

The Public Roads Administration of the Federal Works Agency requires stipulations in contracts on which Federal aid is received which have the effect of stopping bid peddling and eliminating contractors who are really brokers subletting major portions of the contract.

Bid peddling by general contractors after awards of contracts does exist. To secure for the taxpayer's dollar the best quality of workmanship by reliable artisans this practice should be eliminated. A general contractor should not be allowed to speculate upon the fluctuations of the market to secure for himself any possible increased profits to the detriment of full and satisfactory performance of the contract awarded.

Conclusion

Competitive bidding is an established technique in this country for awarding public contracts. Continual study and observation of its operation is essential to maintain this procedure as a device for efficiency, honesty, and progressive thinking in government.

Bismarck's Water Supply

(Continued from page 107)

for four and one-half years, a local plumber told me, "We do not have any more scales in hot water coils. Occasionally we have a hot water tank which produces red water. Lots of hot water systems in our city are producing water just a couple degrees below boiling."

We have found that where red water is a source of trouble it is caused by a gradual dissipation of the tubercules in the distribution system which accumulated there years ago.

I might say in the summing up of this article that the city of Bismarck has taken over a water which was hard and disagreeable to the sight and taste, unfit at times for human consumption, and produced in the 21 years of progressive development a pure, clear, palatable, soft, and stable water.

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In existing factories, office buildings and other industrial structures, this lower power cost may take various forms. It may appear in reduced voltage drop when skimpy wire sizes are replaced. It may show substantial economies when high voltage cables are used and when unit sub-stations are erected at load centers. It may result in savings through power factor correction when full advantage is taken of synchronous motors and capacitors.

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4355

Municipal Law Notes and Decisions

Prepared by NATIONAL INSTITUTE OF MUNICIPAL LAW OFFICERS, Washington, D. C.
Charles S. Rhyne, Executive Director

Adverse Possession—Boundary Line Mistake

In action to quiet title to land claimed by City of Sedalia under adverse possession, held that occupancy of an adjoining proprietor's land under a mistake as to boundary line and without any intention of claiming beyond true boundary line, when ascertained, is not "adverse possession." *Anson* v. *Tietze*, 190 S. W. (2d) 193 (Mo., Nov. 5, 1945).

Airports—Taxation When Located Outside Limits—Agricultural Purposes

In action by city to recover amount of taxes levied against property acquired by plaintiff for a municipal airport and paid under protest, held that such property acquired by city was exempt from taxation by county or state, though such property was located outside city limits and part of land was leased by city for use as airport and remainder for agricultural purposes. *City of Yankton* v. *Madson*, 20 N. W. (2d) 371 (S. D., Oct. 19, 1945).

Annexation—Exclusion of Railroad Property

Where annexation order excluding railway property upon part of which was located railway power plant, held that where evidence clearly shows the necessity and expediency for annexation to town, the court is bound to annex the proposed territory and the absence of compensating benefits to one who finds his property within a territory proposed to be annexed to a town is no valid reason for excluding his property. *Town of Narrows* v. *Giles County*, 35 S. E. (2d) 808 (Va., Nov. 19, 1945).

Assessment Liens Sale of Land to City

Where record of city's proceedings in levying an assessment for a sanitary sewer improvement failed to show a demand by city on property owner for payment of assessment, held that it did not render void an execution sale of a lot to city under the assessment lien. *Throckmorton* v. *City of Tuscumbia*, 23 So. (2d) 547 (Ala., Oct. 18, 1945).

Automobiles—Classification of Vehicles—Seating Capacity

Where classification of vehicles carrying passengers was made according to seating capacity for purpose of imposing license or privilege tax to compensate state for unusual use of public highways by such vehicles as distinguished from classification of trucks upon basis of gross weight, held that such classification is not arbitrary and does not deny to operator of passenger buses equal protection of the laws. *State* v. *Black Hills Transp. Co.*, 20 N. W. (2d) 683 (S. D., Nov. 20, 1945).

Bonds—City Officers—Faithful Performance of Duty

In action by city and county based upon a bond executed by defendant named as principal and another as surety given to secure the faithful performance of the official duties of defendant named as manager of revenue, held that where city manager and ex officio treasurer made remittances to bank to meet interest obligations on bonds in accordance with directions of superior officers, recovery could not be had on his bond for loss resulting on bankruptcy of bank to which funds were remitted. *McGlone* v. *City and County of Denver*, 163 *Pac.* (2d) 646 (Colo., Nov. 26, 1945).

Building Permits—Revocation of—Election to Defeat

In suit to restrain village from enforcing ordinance revoking a building permit issued to plaintiffs, held that newly elected councilmen of village had authority under police power of charter to repeal ordinance under which permit to erect Legion Home in residential section was granted and thus cancel permit, where permittees were not owners of all the lots upon which Home was to be built and permittees had notice before they started to build that people disapproved permit and election was held for purpose of defeating permit. *Miami Shores Village* v. *Wm. N. Brockway Post No. 124 of American Legion*, 24 So. (2d) 33 (Fla., Dec. 14, 1945).

Civil Service—Holding Two Positions

Where person held civil service status as City of Des Moines animal collector, held that he could not continue to hold such position and at same time hold the civil service position of city patrolman. *Ablett* v. *Hartzer*, 20 N. W. (2d) 877 (Iowa, Dec. 11, 1945).

Firemen—Special Immunity from Liability—Basis for Classification

Where law granted immunity to member of municipal fire department of Town of Cicero while operating a motor vehicle engaged in the performance of his duties as a fireman, held that such law is not in violation of constitutional provision prohibiting any local or special law granting special or exclusive privilege, immunity, or franchise, in that there is a reasonable basis for the classification adopted by General Assembly in distinguishing between firemen and other operators of emergency vehicles. *Hansen* v. *Raleigh*, 63 N. E. (2d) 851 (Ill., Nov. 21, 1945).

Leases—Oil and Gas—*Nunc Pro Tunc* Resolution Ratifying

Where City of Uniontown was owner in fee simple of a tract lying on river shore, held that city could execute an oil and gas lease for five years and for so long thereafter as oil and gas lease for five years and for so long thereafter as oil and gas should be produced but in no event for longer than 20 years, and that the general rules regarding entry of *nunc pro tunc* orders apply to municipal legislative bodies and hence city council could enter *nunc pro tunc* resolution ratifying execution and delivery of oil and gas lease by city provided there was sufficient record evidence of council's former actions. *Ricketts* v. *Hiawatha Oil & Gas Co.*, 189 S. W. (2d) 858 (Ky., Oct. 9, 1945).

Liquor—Revocation of Retail License—Police Power

In action against City of Austell to enjoin enforcement of a resolution revoking retail liquor license, held that such revocation under police power of city after county had voted in favor of taxing and controlling liquors did not violate constitutional provision forbidding special laws and requiring general laws to operate uniformly. *Owens* v. *Rutherford*, 36 S. E. (2d) 309 (Ga., Oct. 4, 1945). *Reh. den.* Dec. 3, 1945.

OPA—Ceiling Prices—Validity of Local Law Prohibiting Sales in Excess of

Where New York City local law prohibited wholesalers, jobbers, manufacturers, distributors, and middlemen from selling or buying any commodity or service in excess of maximum price prescribed by Office of Price Administration, held that such law is a valid exercise of city's police power, and is within the general authority of the New York City charter. *People on complaint of Singer* v. *Lewis*, 58 N.Y.S. (2d) 223 (Ct. Spl. Sess. N. Y. City).

Policemen—Misconduct Justifying Removal—Reinstatement

Where charges, even if true, would not have affected the ability of chief of police of City of Fulton to fully discharge the duties of his office nor his general character, held that conduct complained of would not have amounted to such misconduct as to require or justify removal from office. *Cole* v. *Lyboldt*, 58 N.Y.S. (2d) 252 (N. Y. App. Div., Oct. 31, 1945).

PWA—Fee for Engineering Services to City

Where evidence showed at most an agreement by engineer to furnish township services on PWA project for 3½ percent of total cost, which would amount to $3,605, held that the engineer could not recover from township under complaint alleging express contract to pay $5,500 for services. *Gregg* v. *Town of Bourbonnais*, 64 N. E. (2d) 106 (Ill. App., Dec. 13, 1945).

Rent Control—Commercial Rent Act

Where Commercial Rent Act of New York prohibited unjust and unreasonable rents and provided a formula for ascertaining the same during war emergency, held that such Act does not deprive landlord of his property without due process of law. *Kuperschmid* v. *Globe Brief Case Corporation*, 58 N.Y.S. (2d) 71 (N. Y. App., Sept. 11, 1945).

Sewer Rentals—Validity of City Ordinance Imposing

In taxpayer's class bill for injunction restraining city officials from enforcing sewer rent ordinance, held that such ordinance which imposed annual sewer rentals apportioned between users paying water charges by meters as a class and non-meter properties which pay appliance rates is not invalid as an unjust discrimination, since diversity of use and circumstances and varying quantities used by members of a class are elements which cannot be measured with mathematical exactness. *Gericke* v. *City of Philadelphia*, 44 Atl. (2d) 233 (Pa., Oct. 30, 1945).

Sidewalks—Notice of Claim—Knowledge of Defect

In action for injuries sustained in fall on sidewalk, held that giving of notice of accident and claim was a statutory condition precedent to maintaining action against City of Louisville, and statute was not avoided by fact that city had knowledge of defect in sidewalk. *Reibel* v. *Cox*, 189 S. W. (2d) 726 (Ky., Oct. 2, 1945).

Streets—Arcades Over

Where legislative authority was given therefor, held that the governing body of City of Durham could grant permission to owner of buildings abutting on opposite sides of street to construct an arcade over street connecting buildings for private purposes upon showing that such completed arcade would not impair rights of others to use of light and air, and would not unreasonably interfere with public easement of travel and transportation. *Clayton* v. *Liggett & Myers Tobacco Co.*, 35 S. E. (2d) 691 (N. C., Nov. 7, 1945).

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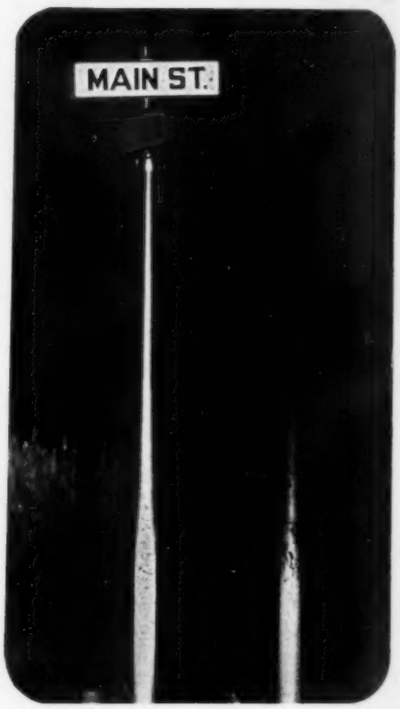

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Zoning and Planning Notes

Edited by FRANK B. WILLIAMS
Author of *The Law of City Planning and Zoning*

Zoning Ordinance—Awning

NEW JERSEY—*French* v. *Cooper,* Inspector of Buildings of Ocean City, Supreme Court, September 25, 1945, reported in 43 Atl. 2nd page 880.

The prosecutor French applied for and was refused a permit to erect a canvas and wooden awning supported by iron piping in front of his building on Atlantic Avenue in Ocean City. This refusal was based upon a provision of the zoning ordinance of the city providing that no fixed metal, wood, or cloth awning should extend more than 5 feet from any main building wall, must not be less than 7 feet in the clear above the sidewalk, or be supported by or attached to any street sidewalk.

The Court holds that this awning is not a part of the building. There is no evidence that it is permanently attached to the building, and it is at most an adjunct to it, i.e., added but not essentially a part of it.

The Court fails to see in what respect the erection of this awning can adversely affect public health, safety, or general welfare.

The fact that a number of nearby property owners favor this erection, and none object, weighs against the reasonableness of the decision to refuse the permit. French is therefore entitled to the permit, and costs of this action.

Building Permit—Change of Ownership

NEW YORK.—Neiburger v. Lewis, Building Commissioner, Supreme Court, June 22, 1945, reported in 57 N. Y. S. 2d, page 542.

In 1939, the Zoning Board of Appeals of the City of Long Beach authorized the Stock Management Corporation, the owner at that time of the premises in question, to use them as a rooming house. This permission has never been revoked. The Stock Corporation never exercised this permission, but later, by a series of conveyances, it became the property of Eva Checknay who applies for a certificate.

It is contended by the Building Commissioner that the right created by the resolution granting the above permission was not a vested right, but could be used solely by the then owner of the premises, the Stock Company, to whom it was originally issued, and that the failure of that company or anyone claiming under it to apply for and secure a building permit under the resolution resulted in the loss of these rights, and the Building Commissioner had no right to issue a building permit to Mrs. Checknay under that resolution.

The Court held, however, that the right was not a personal one, in favor only of the then owner of the premises, but attached to the premises and was available to any subsequent owner until revoked. Mrs. Checknay is therefore entitled to her permit.

Boulevard—Access

OHIO—*State ex rel Copeland* v. *City of Toledo. State ex rel Rugby Reully Co.* v. *City of Toledo,* Court of Appeals, reported in 62 N.E. 2d, page 256.

The City of Toledo acquired an abandoned portion of a canal for a "park and boulevard." Later an ordinance was passed by the city dedicating the property for use for boulevard purposes, and prohibiting the cutting of the curb without its permission. Then the city constructed two strips of pavement there, with a 40-foot park strip in the center and a 16-foot strip between the outer edge of the pavement and Copeland's land.

Copeland now seeks permission to cut the curbs and pass across the intervening strip of land, which permission was denied.

The court accepted the Webster definition of a boulevard as "a broad avenue in or around a city, especially one decoratively laid out with trees, belts of turf, etc." The court further held: "The city, by its legislation and its acts, has designated and dealt with this canal property as a 'boulevard' in contradistinction to the usual street and highway.

"It is obvious that the city cannot maintain ornamental spaces adjoining the pavement as it has the legal right to do in character with its declared intention to dedicate and use this canal property as a 'boulevard,' if public or private ways across such space may be established other than designated by it to effectuate its plan.

"Under the facts, the relators have no greater right in these public lands than that enjoyed by the general public. The city is not required to construct a way across the intervening strip, nor can it be compelled to permit the relators to do so."

EDITOR'S NOTE: The meaning of words is not fixed but varies with the context and the circumstances in which they are used. The above case interprets the word *boulevard,* authorized by statute and ordinances for the improvement of land formerly part of a canal in the city of Toledo. In ordinary usage, a boulevard is a wide street, embellished with trees, shrubs, and strips of lawn in which abutters have all the usual rights of access; but under the legal provisions by which this boulevard was created, the court gives it a meaning closely approaching that of parkway, in which the abutter has no such rights except by permission of the authorities in charge of it.

A highway may be made wide, with so-called "park" strips of grass in the center or at the sides, and embellished with flower beds, shrubs and trees, and still be a street with the usual rights of access in abutting land. Such streets are often popularly called boulevards. It was to differentiate such a highway from an ordinary street that the legal provisions, as interpreted by the court in this case, defined it with such care.

Another excellent illustration of the definition of a road by the circumstances under which it is used is furnished by the case of *Morelight Service Stations, Inc.* v. *Goldman,* 261 N. Y. 32, reported in these *Notes* for May, 1933.

In that case the City of New York laid out a street, called "New Street," for an approach to a bridge. Upon this street land abutted upon which the owners erected gasoline tanks and serviced automobiles by means of portable tanks wheeled to this curb. The Commissioner of Plant and Structures of the City caused a fence to be erected across the front of these premises, which prevented entrance and exit.

The court held that the owners of this land were entitled to have this fence removed, but may not against the judgment of the Commissioner obstruct the sidewalk with their portable tanks. New Street, while it has certain street qualities, is not an ordinary street, but a bridge approach. The street is public in character; over it all travelers may go to and from the bridge; the owners of the abutting land may pass over it to and from their premises for such purposes as do not interfere with the traffic lane to the bridge; but they do not have in this street the usual easements of light, air, and access.

Splitting Lots on Zoning Map—Habitual Violation of Ordinance Variance

OKLAHOMA—*Schuetz* v. *Dossey Lumber Co.* Supreme Court, April 10, 1945, reported in 158 P. 2d 720.

The zoning ordinance of the City of Tulsa forbids the splitting of lots as fixed by the zoning ordinance. The defendant company is seeking a variance from the terms of the ordinance allowing it to locate two houses on its lot, because the splitting of lots is so prevalent in the addition in which its lot is located as to make a denial of its application to do so discrimination or undue hardship; Schuetz, on the other hand, contending that this position does not come within the literal or reasonable interpretation of "particular difficulties" or "unreasonable hardship" which the law requires in such cases.

The evidence shows that 84 percent of the lots in the addition in question have been split with or without official sanction. For this reason, the decision of the Court below, that the applicant should be permitted to split two of his lots, is reasonable.

EDITOR'S NOTE. That habitual violation of an ordinance is a sound basis for amending it, seems clear; that it is ground for a variance from it, much less so; for an amendment applies to all the land in the given district, while a variance affects only one of them, still leaving the situation unsatisfactory.

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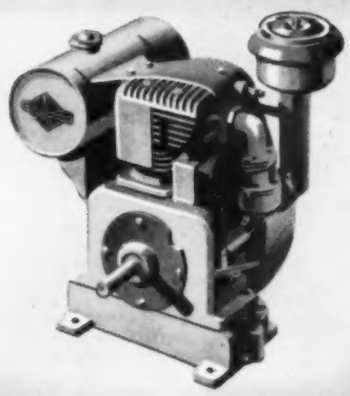

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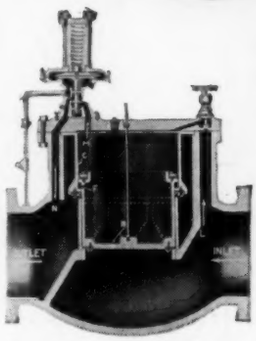

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Conventions—When and Where

Mar. 20-22—**Trenton, N. J.**
NEW JERSEY SEWAGE WORKS ASSOCIATION. Annual Meeting. (Hotel Stacey-Trent). Sec., Treas., Edward P. Molitor, Chatham, N. J.

Mar. 28-29—**Elmira, N. Y.**
AMERICAN WATER WORKS ASSOCIATION—NEW YORK SECTION. Spring Meeting (Mark Twain Hotel). Sec.-Treas., R. K. Blanchard, 50 W. 50th Street, New York 20, N. Y.

Apr. 2-3—**Lafayette, Ind.**
AMERICAN WATER WORKS ASSOCIATION—INDIANA SECTION. Annual Meeting (Purdue Memorial Union). Sec.-Treas., Charles H. Bechert, 402 State Library Bldg., Indianapolis, Ind.

Apr. 3-5—**Chicago, Ill.**
MIDWEST POWER CONFERENCE. Annual Conference (Palmer House). Dir., Stanton E. Winston, Illinois Institute of Technology, Chicago, Ill.

Apr. 3-5—**Atlantic City, N. J.**
NEW JERSEY MOSQUITO EXTERMINATION ASSOCIATION. Annual Meeting (Hotel Ambassador). Sec., Thomas D. Mulhern, New Brunswick, N. J.

*Apr. 8-10—**Clemson, S. C.**
SOUTH CAROLINA WATER AND SEWAGE WORKS ASSN. Annual Meeting and Short School (Clemson College). Sec.-Treas., D. F. Frick, 418 State Office Bldg., Columbia, S. C.

Apr. 8-10—**Niagara Falls, Ont., Canada**
AMERICAN WATER WORKS ASSOCIATION—CANADIAN SECTION. Annual Convention (Hotel General Brock). Sec., Dr. A. E. Berry, c/o Ontario Dept. of Health, Parliament Bldg., Toronto, Ont., Canada.

*Apr. 11-12—**Columbus, Ohio**
LEAGUE OF OHIO MUNICIPALITIES. Annual Conference (Hotel Deshler Wallick). Pres., Chas. E. Slusser, City Hall, Akron, Ohio.

Apr. 11-12—**Butte, Mont.**
MONTANA SEWAGE WORKS ASSOCIATION. Annual Meeting (Hotel Finlen). Sec.-Treas., Herbert B. Foote, Division of Sanitary Engineering, State Board of Health, Helena, Mont.

Apr. 12-13—**Butte, Mont.**
AMERICAN WATER WORKS ASSOCIATION—MONTANA SECTION. Annual Meeting (Hotel Finlen). Sec.-Treas., Herbert B. Foote, Division of Sanitary Engineering, State Board of Health, Helena, Mont.

Apr. 15-16—**Fayetteville, Ark.**
ARKANSAS WATER AND SEWAGE WORKS CONFERENCE. Annual Conference (Engineering Bldg.—University of Arkansas). Sec., Harrison Hale, University of Arkansas, Fayetteville, Ark.

*Apr. 17-18—**Alexandria, La.**
LOUISIANA MUNICIPAL ASSOCIATION. Annual Convention (Hotel Bentley). Sec.-Treas., Mrs. Henry Jastremski, City Hall, Baton Rouge, La.

Apr. 22-24—**Dallas, Texas**
AMERICAN PLANNING AND CIVIC ASSOCIATION. Citizens Conference on Planning. Exec. Sec., Miss Harlean James, 901 Union Trust Building, Washington, D. C.

Apr. 29-30—**Augusta, Ga.**
ASSOCIATION OF COUNTY COMMISSIONERS OF GEORGIA. Annual Meeting (Hotel Bon Air). Exec. Sec., Miss Betty Peeler, P. O. Box 57, Decatur, Ga.

Apr. 30—May 1—**Atlantic City, N. J.**
CHAMBER OF COMMERCE OF THE UNITED STATES. Annual Meeting (Convention Hall). Gen. Mgr., Ralph Bradford, 1615 H St., N.W., Washington, D. C.

May 6-8—**New York, N. Y.**
AMERICAN SOCIETY OF PLANNING OFFICIALS. Annual Meeting (Hotel New Yorker). Exec. Dir., Walter H. Blucher, 1313 E. 60th Street, Chicago 37, Ill.

May 6-10—**St. Louis, Mo.**
AMERICAN WATER WORKS ASSOCIATION. Annual Convention. Sec., Harry E. Jordan, 500 Fifth Ave., New York 18, N. Y.

* First appearance on this page.

*May 8-10—**Washington, D. C.**
PRESIDENT'S HIGHWAY SAFETY CONFERENCE. (Interdepartmental Auditorium.)

May 16-17—**Yakima, Wash.**
ASSOCIATION OF WASHINGTON CITIES. Annual Meeting (Hotels Donnelly and Commercial). Acting Sec., Joshua H. Vogel, University of Washington, Seattle, Wash.

*May 16-17—**Baltimore, Md.**
MARYLAND-DELAWARE WATER AND SEWERAGE ASSOCIATION. Annual Meeting Hotel Lord Baltimore). Sec., Miss E. V. Gipe, 2411 N. Charles St., Baltimore, Md.

*May 17—**Greenwich, Conn.**
NEW ENGLAND SEWAGE WORKS ASSOCIATION. Spring Meeting (Pickwick Arms Hotel). Sec.-Treas., Walter E. Merrill, 511A State House, Boston, Mass. (State Dept. Public Health).

*May 23-24—**Gearhart, Oregon**
AMERICAN WATER WORKS ASSOCIATION—PACIFIC NORTHWEST SECTION. Annual Meeting (Hotel Gearhart). Sec.-Treas., Fred Merryfield, Department of Civil Engineering, Oregon State College, Corvallis, Ore.

*June 2-4—**Pittsburgh, Pa.**
PENNSYLVANIA STATE ASSOCIATION OF TOWNSHIP COMMISSIONERS. Annual Meeting (Hotel William Penn). Sec.-Treas., H. A. Fritschman, Upper Darby, Pa.

June 3-6—**Boston, Mass.**
NATIONAL FIRE PROTECTION ASSOCIATION. Annual Meeting (Hotel Statler). Managing Dir., Percy Bugbee, 60 Batterymarch St., Boston, Mass.

June 5-7—**Rochester, N. Y.**
NEW YORK STATE CONFERENCE OF MAYORS AND OTHER MUNICIPAL OFFICIALS. Annual Meeting (Hotel Seneca). Exec. Sec., William P. Capes, 6 Elk St., Albany, N. Y.

*June 10-13—**Brainerd, Minn.**
LEAGUE OF MINNESOTA MUNICIPALITIES. Annual Convention. Exec. Sec., C. C. Ludwig, University of Minnesota, Minneapolis, Minn.

June 10-13—**Richmond, Va.**
MUNICIPAL FINANCE OFFICERS' ASSOCIATION OF THE UNITED STATES AND CANADA. Annual Convention (Hotel John Marshall). Exec. Sec., Carl H. Charters, 1313 E. 60th St., Chicago.

June 13-14—**Lafayette, Ind.**
CENTRAL STATES SEWAGE WORKS ASSOCIATION. Annual Meeting (Purdue University). Sec.-Treas., J. C. Mackin, Route 4, Madison, Wis.

June 17-19—**Cincinnati, Ohio**
NATIONAL ASSOCIATION OF COUNTY OFFICIALS. Annual Meeting (Hotel Netherlands-Plaza). Sec.- Treas., George F. Simmons, Ogden, Utah.

*June 20-21—**Akron, Ohio**
OHIO CONFERENCE OF SEWAGE TREATMENT. Annual Meeting (Hotel Mayflower). Sec., Don Heffelfinger, c/o Sewage Treatment Plant, Alliance, Ohio.

*June 20-22—**Reading, Pa.**
PENNSYLVANIA STATE ASSOCIATION OF BOROUGHS. Annual Convention (Abraham Lincoln Hotel). Pres., Thomas F. Chrosthwaite, Hanover, Pa.

*June 23-26—**Minneapolis, Minn.**
SMOKE PREVENTION ASSOCIATION. Annual Meeting (Hotel Nicollet). Sec., Frank A. Chambers, 139 North Clark St., Chicago, Ill.

June 24-27—**Vancouver, British Columbia**
CANADIAN FEDERATION OF MAYORS AND MUNICIPALITIES. Annual Conference (Hotel Vancouver). Sec., Miss Jessica Allan, Mount Royal Hotel, Montreal, Quebec.

July 3-5—**Buffalo, N. Y.**
NATIONAL EDUCATION ASSOCIATION OF THE UNITED STATES. Annual Meeting of Representative Assembly (Hotel Statler). Exec. Sec., Willard E. Givens, 1201 16th St., N.W., Washington, D. C.

July 22-24—**Pittsburgh, Pa.**
PENNSYLVANIA CHIEFS OF POLICE ASSOCIATION. Annual Meeting (Hotel William Penn). Sec., F. B. Titus, Lansdowne, Pa.

*July 23-25—**Utica, N. Y.**
NEW YORK STATE ASSOCIATION OF CHIEFS OF POLICE. Annual Meeting (Hotel Utica). Sec.-Treas., R. W. Morris, Box 203, Capitol Station, Albany 1, N. Y.

*July 23-26—**Cleveland, Ohio**
INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual Meeting (Hotel Statler). Sec., Daniel B. Tierney, 8 Robbins Rd., Arlington, Mass.

*Aug. 26-28—**State College, Pa.**
PENNSYLVANIA WATER WORKS ASSOCIATION. Annual Meeting (Penna. State College Bldgs.). Sec., I. M. Glace, 22 South 22nd St., Harrisburg, Pa.

*Aug. 29-31—**Cedar City, Utah**
MUNICIPAL LEAGUE OF UTAH. Annual Meeting (Hotel Escalante). Exec. Sec., Mrs. Lyla Ray, 318 McIntyre Bldg., Salt Lake City, 1.

(*Continued on page* 147)

1946 Institutes for Chamber of Commerce Executives

THE idea of a summer institute for commercial and trade organization executives — inaugurated by The American City Bureau in 1915, continued annually under the Bureau's auspices until 1921, and then taken over by the Chamber of Commerce of the the United States—has shown expanding vitality over the years.

For the summer of 1946 the *News Letter* of the Chamber of Commerce of the United States announces six such institutes, as follows:

June 23-29—SOUTHEASTERN INSTITUTE FOR COMMERCIAL ORGANIZATION EXECUTIVES. University of North Carolina, Chapel Hill, N. C.; L. P. Dickie, Mgr., Atlanta Chamber of Commerce Building, Atlanta 3, Ga.

July 14-20—SOUTHWESTERN CHAMBER OF COMMERCE INSTITUTE. Baker Hotel, Dallas, Texas; D. Hodson Lewis, Mgr., Dallas Chamber of Commerce Building, Dallas 2, Texas.

July 21-27—WESTERN INSTITUTE OF COMMERCIAL AND TRADE EXECUTIVES. Whittier College, Whittier, Calif.; Wm. E. Hammond, Mgr., 333 Pine Street, San Francisco 4, Calif.

July 28 *to August* 2—ROCKY MOUNTAIN INSTITUTE. University of Montana, Missoula, Mont.; J. E. Pratt, Mgr., 1445 Rand Tower, Minneapolis, Minn.

August 4-10—NORTHEASTERN INSTITUTE FOR COMMERCIAL AND TRADE ORGANIZATION EXECUTIVES. Yale University, New Haven, Conn.; Donald Marcellus, Mgr., 420 Lexington Ave., Room 1724, New York 17, N. Y.

August 11-17—NATIONAL INSTITUTE FOR COMMERCIAL AND TRADE ORGANIZATION EXECUTIVES. Northwestern University, Evanston, Ill.; Clarence R. Miles, Mgr., 832 First National Bank Building, Chicago 3, Ill.

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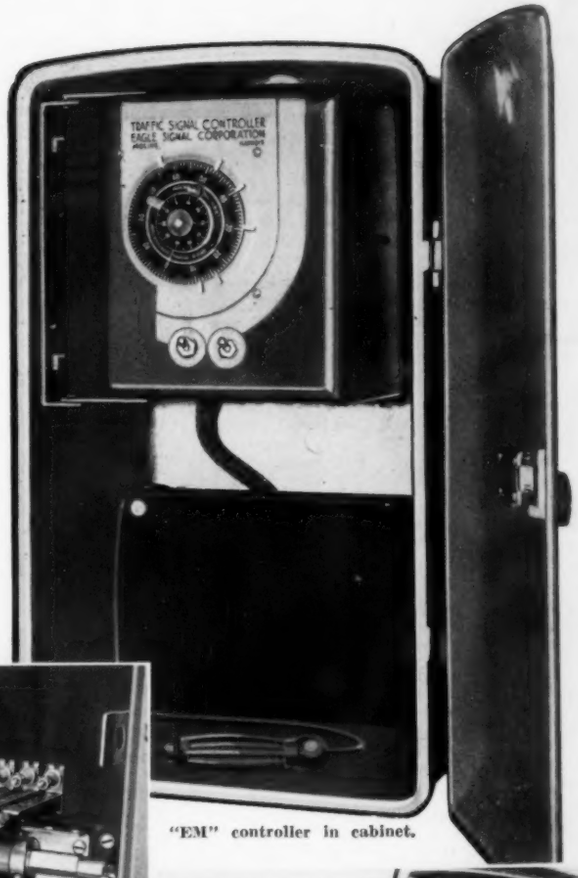

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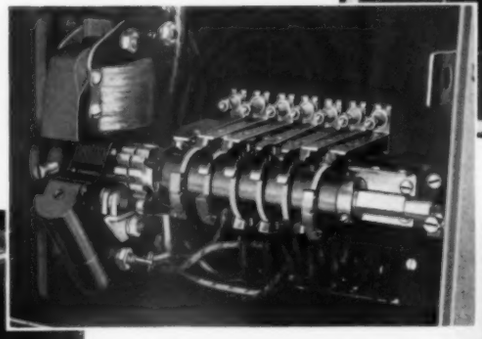

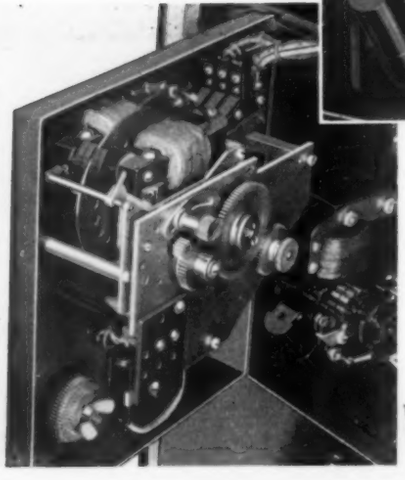

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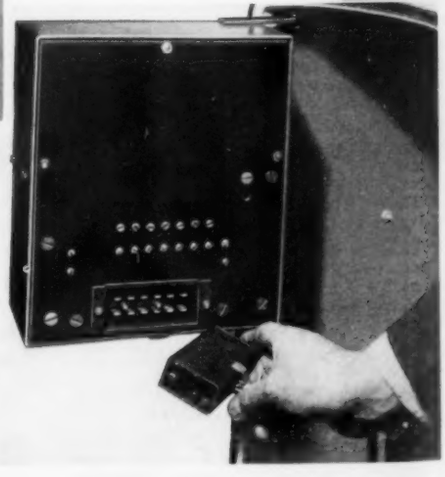

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Municipal and Civic Publications

Municipal Revenue

WHERE CITIES GET THEIR MONEY.—*By A. M. Hillhouse & Muriel Magelssen. Municipal Finance Officers Association.* 1313 *E. 60th St., Chicago 37, Ill.* 1945. 229 *pp.* $5.

This book discusses the measures which cities are using to raise revenue. Examples of cities which use a particular source of revenue are given for each population class. Furthermore, for nearly every type of tax, information is given about the official name, the year it was adopted, tax base and tax rate, methods of collection, and the amount yielded by the tax.

The book is divided into twelve separate sections and includes 51 tables. Special chapters are devoted to amusement taxes, licenses, consumption taxes, motorists taxes, state shared taxes and grants in aid. Administrative problems are discussed in a special section.

(See page 101 of this issue)

The Ideal City: Modern Versions

19TH AND 20TH CENTURY PROPOSALS FOR IDEAL CITIES: A SELECTED LIST OF REFERENCES.—*Compiled in the Library of the Departments of Landscape Architecture and Regional Planning, Harvard University, Cambridge, Mass. By Katherine McNamara.* 1945. *Mimeo.* 4 *pp.*

A bibliography which covers some of the important works on the subject of city blueprints by American, British, French, German, and South American authors.

To Prevent Another Depression

A PROGRAM FOR SUSTAINING EMPLOYMENT.—*Chamber of Commerce of the United States of America. Washington, D. C.* 1945. 32 *pp.*

Report of the Chamber of Commerce Committee on Economic Policy which, in the words of its sponsors, if properly implemented, should do much to prevent another depression. It is concerned with the question of attaining and maintaining employment and prosperity and states the Chamber's case against governmental "restrictionism" which the Committee feels is hampering reconversion. The booklet also urges the deferral of public works until a general depression makes their construction essential for the national economy.

Building in the United States and the Soviet Union

PROCEEDINGS OF THE AMERICAN-SOVIET BUILDING CONFERENCE.—*Published by the Architects Committee of the National Council of American-Soviet Friendship and the* Architectural Forum. 1945. 206 *pp.* $1.75.

A transcript of the American-Soviet Building Conference which was held to initiate an exchange of building information and to acquaint visiting Soviet specialists with American building developments. The four panels here transcribed include 1. Building Industry Organization. 2. Prefabrication. 3. Industrial Buildings. 4. Mechanical Systems and Utilities of the Small House. Leading architects, editors, engineers, and manufacturers participated in the discussions.

In addition to an unusually detailed coverage of American building methods, this book contains the first detailed report of the mobilization of the Soviet construction industry for war building and reconstruction.

Civic Club Indexes

ANNALS OF THE CIVIC CLUB OF ALLEGHENY COUNTY.—*Compiled on the occasion of the fiftieth anniversary. Vols.* 1, 2, 3. 1945. *Pittsburgh, Pa.*

Index to the annual reports of the Civic Club of Allegheny County, 1899-1902-1907. Also index to club bulletins, 1914-1933. All indexes are arranged by subject, year, and page.

Preventive Medicine

MAKING HEALTH VISIBLE.—*Published by the Board of Trustees of Cleveland Health Museum, 8811 Euclid Ave., Cleveland, Ohio.* 1945. *Illus.* 32 *pp.* 25c.

An account of the first years of operation of the Cleveland Health Museum, a non-profit educational institution, designed to disseminate accurate facts of medical science to the general public. The museum prepares exhibits, issues and makes available educational literature. This booklet sums up what has been achieved so far and is designed to be a guide for those in the public health field.

First Line of Defense

WE CAN HAVE BETTER SCHOOLS.—*By Maxwell S. Stewart. Public Affairs Committee, Inc., 30 Rockefeller Plaza, New York 20, N. Y.* 31 *pp.* 10c.

This pamphlet is based on a round table discussion on war and education which was held in February 1945 under the sponsorship of the Public Affairs Committee and attended by outstanding educators. It is a forthright analysis of and attack on our failure to meet the educational standards which are the backbone of a democratic industrialized society.

Among the many weaknesses in the educational system which were revealed by the war, the author states, are uneven opportunities throughout the country, race prejudice, outdated methods and antiquated materials, overcrowding, insufficiently trained teachers, and lack of clear-cut goals.

The pamphlet goes on to propose methods of reorganization, the first and foremost requirement of which is federal aid. When they are better equipped, staffed, and prepared to do their job, the schools will be able to devote their undivided attention to their main task—that of making American citizens citizens of the world.

Teen Taverns

YOUTH CENTERS.—*Office of Community War Services, Division of Recreation, Federal Security Agency, Washington, D. C.* 1945. *Illus.* 34 *pp.*

This survey is based on questionnaires sent to 303 youth centers all over the country. The term "Youth Center" in this study applies to recreation centers used by young people with a program which they themselves operate. The experience of these wartime developments in the recreation field is here evaluated, specific experiences are recounted on the basis of both the response of the youngsters themselves and their adult advisers.

On the basis of all the available facts, the authors of this pamphlet believe that youth centers are here to stay. A bibliography is included which cites further specific instances of successful youth center operation.

Not by Houses Alone

THE POST-WAR REPORT 1945.—*Syracuse-Onondaga Post-War Planning Council, Syracuse, N. Y.* 1945. *Illus.* 154 *pp.*

This extensive, well-illustrated and annotated study of post-war needs is the result of painstaking research by the Syracuse-Onondaga Post-War Planning Council supported by individual citizens and civic organizations, as well as national publications, industrial concerns, private agencies, and government departments.

The underlying objectives of this post-war plan is not exclusively the improvement of existing community facilities or the construction of new ones. While all aspects of social, economic, and technical planning seem to have been touched upon, the report also proposes improvements of a more intangible nature, such as race relations programs, greater stress on capital-labor cooperation, cultural orientation, and a general re-examination of spiritual values for the betterment of the community and its members.

Planners Talk Shop

PLANNING 1945. PART I.—*American Society of Planning Officials, 1313 East 60th St., Chicago 37, Ill.* 1945. 82 *pp.*

Proceedings of a discussion conference on problems of large cities held in Chicago last May. The participants, all well-known in the planning field, considered such pertinent problems as Urban Redevelopment; Airport Zoning; Financing Improvement Programs; and others. The transcript of these debates should offer timely advice to all planning officials.

PLANNING 1945. PART II—88 *pp.*

Proceedings of a discussion conference on state planning problems held last July. The topics discussed include State Aid to Local Planning; Organization and Functions of Intra-State Regional Planning Agencies and Inter-State Regional Planning Agencies; Community Development Surveys; and others.

California Counties

COUNTY GOVERNMENT ORGANIZATION IN CALIFORNIA.—*By Robert W. Binkley, Jr. Bureau of Public Administration. University of California, Berkeley, Calif.* 1945. 69 *pp.* 75c.

A survey of county government organization in the state of California, covering counties which operate under the provisions of the state laws and home rule counties. Mostly in table and outline form, this pamphlet is concerned with county officials, both elected and appointed. A special section is devoted to the city and county of San Francisco.

TVA: Pro and Con

TVA: AN AMERICAN INVENTION.—*By David E. Lilienthal;* YOUR ELECTRICITY AND YOUR MONEY.—*By Charles W. Kellogg. Reprinted from the* Atlantic Monthly, *January* 1946.

Two articles which appeared in the *Atlantic Monthly* magazine in favor and against the TVA and the subsequent establishment of new valley authorities. Mr. Charles W. Kellogg, President of the Edison Electric Company and spokesman for privately owned electric utilities presents the traditional arguments against electric power produced by government dams. David Lilienthal, Director of TVA since 1933 and Chairman since 1941, defends his baby with much conviction. Mr. Kellogg's rebuttal brings the debate to an abrupt end—for the time being.

Pensions and Retirement Funds

BRIEF PRESENTED TO THE JOINT LEGISLATIVE INTERIM COMMITTEE OF PENSION AND RETIREMENT PLANS RELATIVE TO THE WISCONSIN MUNICIPAL RETIREMENT FUND CREATED BY SECTION 66.90.

BRIEF PRESENTED TO THE JOINT LEGISLATIVE INTERIM COMMITTEE ON PENSION AND RETIREMENT PLANS RELATIVE TO THE PENSION SYSTEMS FOR POLICEMEN AND FIREMEN ESTABLISHED BY SECTIONS 62.13 (9) & (10) AND 61.65.—*Submitted by League of Wisconsin Municipalities, 30 E. Johnson St., Madison 3, Wis. January* 1946. *Mimeo.* 9 *pp. and* 13 *pp. respectively.*

Both briefs, contents of which are stated in the titles, were submitted by the Committee on Municipal Finance and Taxation on behalf of the League of Wisconsin Municipalities.

The first brief states that the state government has failed to adhere to the policy of requiring that adequate reserves be available to meet the obligation incurred as insurance policies involving the payment of an annuity mature. Suggestions are made to remedy the situation. The second brief is submitted by the League as a sponsor of the municipal retirement fund. It also contains recommendations designed to help operate the system on an actuarially sound basis.

THE NEW "TWIN" AUTOMATIC PARKING METER

Above is the rear view of the meter. Each rear flag operates simultaneously with its corresponding front flag.

The "TWIN" on the stanchion → and immediately below show the front face of the meter.

This illustration of meter head shows position of violation flags when parking spaces are unoccupied.

★

The ONLY meter which parks two adjoining cars. Covered by patents recently issued.

★

Large, red signal flags, tolling off the minutes against a white dial background, provide instant visibility to the police officer even from a great distance. *He can tab two cars with one look.*

★

It is a beacon into the post-war future of parking and traffic control.

★

Because you only need half the number of meters:

YOU SAVE YOUR CITY
Thousands of Dollars in Cost of Meters, Cost of Maintenance, Service, Collection, Etc.

★

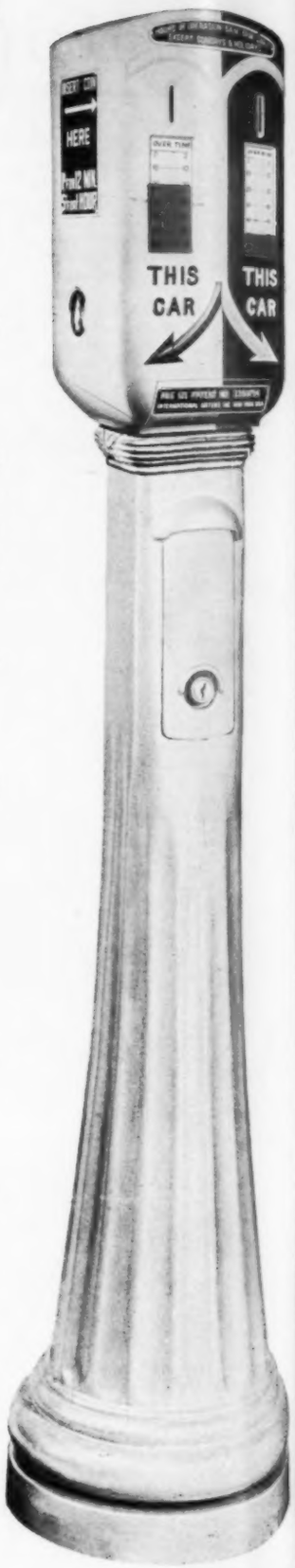
It amortizes itself (from collections) in about half the time required by other meters.

★

You have only half the posts on "Main St." The stanchion helps to beautify the city.

You see the "Twin" opened up at the right ready for minor repairs without removal.

The mechanism can be lifted out without the turn of a screw or bolt —and replaced as easily.



SEE OUR ADS IN JUNE THROUGH FEBRUARY ISSUES

INTERNATIONAL METERS, INC.

41 East 42nd Street **Phone: MUrray Hill 2-5236** **New York 17, N. Y.**

Purchasing Against Odds

THE WAR YEARS.—*Report on the War-Time Activities of the Department of Purchase. City of New York* 1945. 155 *pp.*

The achievement record of New York City's purchasing department which, under the aegis of Commissioner Albert Pleydell, maintained and improved procurement services in spite of governmental restrictions, stretched the city's financial reserves to last throughout the war, and met the war emergency regardless of labor shortages, rationing, and red tape.

The book contains nine chapters, ten tables, and appendices. Of particular interest is the section dealing with the liaison with federal agencies and surplus property operations.

Social Protection Techniques

I. TECHNIQUES OF LAW ENFORCEMENT IN THE USE OF POLICEWOMEN WITH SPECIAL REFERENCE TO SOCIAL PROTECTION.

II. RECOMMENDATIONS ON STANDARDS FOR DETENTION OF JUVENILES AND ADULTS.—*Compiled by the National Advisory Police Committee on Social Protection of the Federal Security Agency. Washington, D. C.* 1945. 93 *pp.* 24 *pp.*

Two pamphlets of a series published by the Social Protection Division of the Federal Security Agency. The booklet on law enforcement is for the most part a handbook for policewomen which attempts to summarize the qualifications for the job as well as the ramifications of it. The second pamphlet deals specifically with standards which should be adhered to in penal institutions. Both pamphlets are available from the Federal Security Agency. For additional information on this subject, see "Weapons for the Cities' War on Prostitution," THE AMERICAN CITY, January 1946, page 85.

Residential Density Standards

LAND VALUES AND DENSITY STANDARDS IN URBAN REDEVELOPMENT.—*By William H. Ludlow; in the Journal of The American Institute of Planners, Vol XI, No. 4, Oct.-Nov.-Dec.* 1945.

This article presents objective residential density standards which may be applied to blighted areas and a method of determining the appropriate land value for a given density. The author suggests that these tools may be used immediately in connection with land purchase practices for redevelopment projects and establishments of assessments, and that later they may be effective as a basis for drastic tightening of zoning restrictions. Thus deflation of excessive land values will be encouraged and rehabilitation of wide areas will be facilitated.

For Municipal Personnel

KEY TO MUNICIPAL CIVIL SERVICE IN PORTLAND, OREGON.—*Civil Service Board, Portland, Ore.* 1945. *Illus.* 32 *pp.*

Manual which furnishes answers to the questions of employees and also acts as a working guide for supervisors on personnel matters.

Some of the questions touched upon here are the recruiting and examining process, appointment, leaves of absence, personnel policies, benefits, and other matters relating to lay-offs, discharges, and reinstatement.

Long-Range Plan for East Orange, N. J.

HOUSING & ZONING.—*Third and Fourth of a Series of Reports by the City Planning Board, East Orange, N. J.* 1945. 95 *pp.*

Two reports, on housing and on zoning, combined into a single report because of their interrelationship, by Harland Bartholomew and Associates of St. Louis. The planners point out that the report submitted is intended as a long-range proposition, both in terms of housing and redevelopment on the one side and land use and zoning on the other. Among other suggestions, a new zoning ordinance is considered necessary to direct future growth into proper areas. Several detail maps illustrating redevelopment plans for blighted sections of the community are included.

New Markets Wanted

OUTLINE FOR A COMMUNITY INDUSTRIAL DEVELOPMENT PROGRAM.—*By The American Industrial Development Council. Prepared by Arthur M. Field, Charleston Development Board, Charleston, S. C.* 1946. 76 *pp.* $1.50.

Communities are paying increased attention to the location of industrial and commercial outposts in their trade areas and businessmen are looking for the right localities for new plants or branches. This outline is an endeavor to work out a basic procedure which will make these efforts most productive.

Addressed to civic leaders in government and industry, this book attempts to analyze the economic, social, and geographical factors to be taken into account before a community makes a bid for new industries. Methods of promotion and research are discussed, as are operating procedures and administrative functions, all of which are part of community mobilization for more trade and new markets.

Adequate Library Facilities for All

LIBRARY EXTENSION: PROBLEMS AND SOLUTIONS.—*Edited by Carleton B. Joeckel. University of Chicago Press, Chicago, Ill.* 1946. 260 *pp.* $3.

A collection of papers presented before the Library Institute at the University of Chicago in August 1944. In the first part of the book, Jerome G. Kerwin, Lowell Martin, J. H. Kolb, and Eleanor Hitt discuss the organization of government and library service on the level of local units. C. Herman Pritchett, Helen M. Harris, Haven Emerson, and Mildred L. Batchelder, in the second section, deal with various types of larger units and regional services in rural areas. Regional services in metropolitan areas are discussed by John Vieg and Amy Winslow. The following chapters weigh the pros and cons of state and federal aid to public libraries and education, in papers being presented by Loleta D. Fyan, Paul A. T. Noon, Carl H. Chatters, Julia Wright Merrill, Floyd W. Reeves, and Carl H. Milam.

Traffic Conference

HIGHWAY TRAFFIC CONFERENCE PROCEEDINGS.—*Eno Foundation for Highway Traffic Control, Inc., Saugatuck, Conn.* 1945. *Illus.* 129 *pp.*

This booklet contains a complete record of the conference held by the Eno Foundation in New York last May. The reports submitted and papers read at that meeting are transcribed here for the information of traffic officials who were unable to attend due to wartime transportation restrictions. Illustrations and valuable statistics are included.

Other Reports Received

BUFFALO, N. Y.—Annual Report of the City of Buffalo, 1945. Department of Audit and Control. 116 pp.

CINCINNATI, OHIO—Purchasing Report of the City of Cincinnati, 1945. Illus. 16 pp.

DALLAS, TEXAS—A Master Plan for Dallas, Texas. Water and Sanitary Sewer Utilities. February 1945. 38 pp.

FEDERAL WORKS AGENCY—Sixth Annual Report, 1945. 54 pp.

MASON CITY, IOWA—Annual Report, 1944-1945. Illus. 20 pp.

MOUNT UNION, PA.—Report of the Borough of Mount Union, 1945. Mimeo.

NEW YORK, N. Y.—*World Air Route Planning.* The Port of New York Authority. 1945. 19 pp. Maps.

PASADENA, CALIF.—Thirty-Second Annual Report of the Water Department. 1945. 63 pp.

SAN DIEGO, CALIF.—*Year Book,* 1944 & 1945. Annual Report of the City Manager. Illus. 59 pp.

STOCKBRIDGE, MASS.—*Welcome Veterans.* Annual Report of the Town Officers. 1945. 69 pp. Also Report of the School Committee. 1945. 21 pp.

TENNESSEE—*Stream Pollution in Tennessee.* State of Tennessee Stream Pollution Study Board, Nashville, Tenn. 1943-1944. 136 pp.

TRAFFIC—*Traffic and Residential Real Estate.* Prepared by Reginald R. Isaacs and Victor H. Bringe. Reprint from Federal Home Loan Bank Review. Maps.

WILMINGTON, N. C.—*Your Municipal Government.* Annual Report 1944-1945. Illus. 40 pp.

WEST READING, PA.—*Your Borough,* 1944-1945. 38th Annual Municipal Report. Illus. 44 pp.

Conventions

(*Continued from page* 143)

Aug. 19-21—Chicago, Ill.
NATIONAL INSTITUTE OF GOVERNMENTAL PURCHASING, INC. Annual Conference and Products Exhibit (Hotel Stevens). Exec. Dir., Albert H. Hall, 730 Jackson Pl., N.W., Washington 6, D. C.

***Aug. 28-30—State College, Pa.**
PENNSYLVANIA SEWAGE WORKS ASSOCIATION. Annual Meeting (Penna. State College Bldgs.). Sec., Bernard S. Bush, c/o Department of Public Health, Kirby Health Center, Wilkes-Barre, Pa.

***Sept. 9-10—Savannah, Ga.**
AMERICAN WATER WORKS ASSOCIATION—SOUTHEASTERN SECTION. Annual Meeting (Hotel DeSoto). Sec., B. P. Rice, Reconstruction Finance Corp., Bond Service Division, Healey Bldg., Atlanta, Ga.

Sept. 16-20—Poland Springs, Me.
NEW ENGLAND WATER WORKS ASSOCIATION. Annual Convention (Poland Spring House). Sec., Walter Conroy, 613 Statler Bldg., Boston, Conn.

***Sept. 18-20—Traverse City, Mich.**
AMERICAN WATER WORKS ASSOCIATION—MICHIGAN SECTION. Annual Meeting (Hotel Park Place). Sec.-Treas., Raymond J. Faust, Division of Water Supply, Bureau of Engineering, State Department of Health, Lansing 4, Mich.

***Sept. 18-21—Quebec, Canada**
ILLUMINATING ENGINEERING SOCIETY. Annual Convention (Hotel Frontenac). Exec. Sec., A. D. Hinckley, 51 Madison, New York 10, N. Y.

***Sept. 24-26—New Castle, Pa.**
PENNSYLVANIA STATE ASSOCIATION OF COUNTY COMMISSIONERS. Annual Convention (The Castleton Hotel). Sec.-Treas., Herbert S. Bolger, Court House, Hollidaysburg, Pa.

***Sept. 24-27—Boston, Mass.**
NATIONAL ASSOCIATION OF ASSESSING OFFICERS. National Conference on Assessment Administration (Hotel Statler). Exec. Dir., Albert W. Noonan, 1313 E. 60th St., Chicago, Ill.

***Sept. 26-28—Harrisburg, Pa.**
PENNSYLVANIA LEAGUE OF THIRD CLASS CITIES. Annual Convention (Penn Harris Hotel). Pres., Walter Greenwood, 320 Municipal Bldg., Harrisburg, Pa.

***Oct. 3-5—Columbus, Ohio**
INSTITUTE OF TRAFFIC ENGINEERS. Annual Meeting (Hotel Deshler-Wallick). Sec.-Treas., Wilbur S. Smith, Strathcona Hall, New Haven 1, Conn.

***Oct. 7-9—Toronto, Ontario**
FEDERATION OF SEWAGE WORKS ASSOCIATION. Annual Meeting (Hotel Royal York). Sec., W. H. Wiseley, 325-26 Illinois Bldg., Champaign, Ill.

***Oct. 9-11—Columbus, Ohio**
AMERICAN WATER WORKS ASSOCIATION—OHIO SECTION. Annual Conference (Hotel Fort Hayes). Sec.-Treas., F. P. Fischer, Wallace & Tiernan, Cleveland 13, Ohio.

***Oct. 14-17—Galveston, Texas**
AMERICAN WATER WORKS ASSOCIATION—SOUTHWEST SECTION. Annual Meeting. Sec., L. A. Jackson, Mgr., Litle Rock Water Works, Little Rock, Ark.

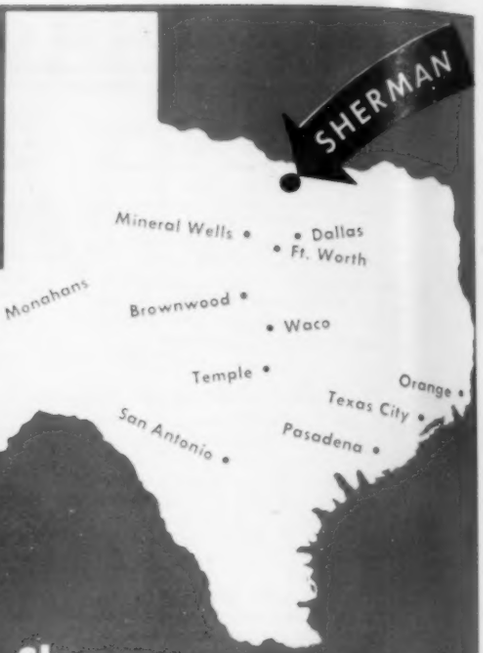
Another Texas City Adopts
DROTT BULLCLAM SHOVEL METHOD OF SANITARY FILL

THE DROTT BULLCLAM SHOVEL SHOWN HERE SERVES SHERMAN'S 18,000 POPULATION

DIGGING TRENCH — All the material taken from this trench was moved with the Drott Bullclam Shovel — and used as covering material for the refuse. This machine digs, transports and dumps—no other equipment needed.

COMPACTING — All refuse — boxes, crates, cans, other waste — is thoroughly compacted by Drott Bullclam shovel traveling back and forth over it. This means even settling, eliminates fire hazard.

FINISHED SECTION — View of finished trench and completed fill at left. At far end of trench Drott Bullclam Shovel compresses refuse. All waste is completely covered during operations and at end of day's work.

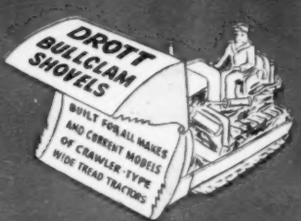


Sherman is the thirteenth city in the State of Texas alone to use this modern means of refuse disposal. Others are • Texas City • Monahans • Waco • Dallas • El Paso • San Antonio • Temple • Pasadena • Mineral Wells • Ft. Worth • Brownwood • Orange.

In the north, south, east and west . . . cities throughout the nation are finding the Drott Bullclam Shovel Method of Sanitary Fill is the most satisfactory, the most economical answer to the problem of waste disposal. You will find it's your answer, too! Investigate!

FREE

Get The Complete Story! Send For This Book—"Answer To Your Waste Disposal Problems . . . with the Drott Bullclam Shovel."



Operated by DROTT POSITIVE, CLOSED HYDRAULIC SYSTEM. SMOOTH • QUICK • DEPENDABLE. Keeps dirt and air out . . . keeps oil in! Used successfully on Drott equipment for many years.

DROTT
UNIVERSAL
EQUIPMENT

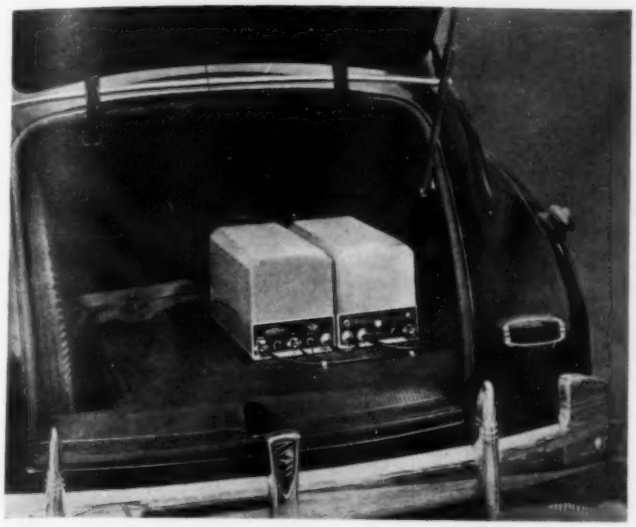
DROTT MANUFACTURING CORP.

(FORMERLY BI-WAY SERVICE CORPORATION)

5141 N. 35th STREET, MILWAUKEE 9, WISCONSIN

News and Illustrations

Items of Interest to City, Town and County Officials and Others Concerned with the Economical Construction and Efficient Operation of Public Improvement Undertakings



Transmitting and receiving units are housed in identical cabinets, 8½ inches high, 8 inches wide, and 18 inches long. All terminal and leads come out one end, so the units can be installed side by side, conserving truck compartment space

Instant-Heating Radio Tubes Reduce Battery Drain

Mobile 50 and 100-watt FM radio transmitters which operate from the standard 6-volt automobile battery, and a companion FM receiver that offers a truly natural voice quality, are announced by Kaar Engineering Company, Palo Alto, Calif.

Use of instant-heating tubes makes possible higher power than has previously been considered practical for mobile units. Keeping filaments hot when the transmitter is merely standing by for emergency calls is unnecessary with these transmitters. Pushing the microphone button instantly heats the filaments and puts the message on the air.

Battery drain and power waste due to the widespread practice of keeping transmitter filaments hot during standby is far greater than generally realized. Clocking 140 radiotelephone-equipped cars operating in three shifts in a city of 600,000, showed that the average transmitting time over a 24-hour period was only 3 minutes and 15 seconds. In this instance, the average standby drain on the battery was 56.2 ampere hours—current wasted just to assure immediate operation of the transmitters. The standby drain would have been zero with the Kaar FM-50X (50 watt) or FM-100X (100 watt) transmitters using instant-heating tubes.

John Kienle Dies

John A. Kienle, an honorary member of the American Water Works Association, died in the Johns Hopkins Hospital, Baltimore, Md., on February 8th. Mr. Kienle will be remembered as one of the group of active members of the association who worked together to make chlorination a safe and satisfactory factor in water treatment.

Mr. Kienle's technical education in hydraulic engineering was obtained at Temple University, Philadelphia, Pa. He entered the water department at Wilmington in 1904 as assistant engineer and in 1908 was appointed chief engineer. In 1913 he resigned to become sales manager of the Electro-Bleaching Gas Co., New York. In 1920 he joined the staff of the Mathieson Alkali Works, Inc., New York, N. Y., as sales manager and in 1922 was appointed vice-president and director of sales, which position he occupied until he retired on November 18, 1942.

Mr. Kienle became a member of the American Water Works Association in 1909 and was Secretary of the Water Purification Division of the association for the first five years of its organization. In 1936-38 and again in 1939-42 he was a director of A.W.W.A. representing the Water Works Manufacturers Association. He was secretary of the Water Works Manufacturers Association for 25 years.

Mr. Kienle was also a member of the New England Water Works Association and the Chemists Club, New York.

Solvay Sales News

Col. John H. Elleman has been appointed manager of calcium chloride sales by the Solvay Sales Corp., 40 Rector St., N. Y., having succeeded George H. Kimber, who resigned to accept a position as managing director of the Calcium Chloride Association. Col. Elleman is on terminal leave from the Engineer Corps, U.S.A., having served for the last four years as district engineer with headquarters at Syracuse, N. Y. Before entering the Army he was chief field engineer of the Calcium Chloride Division.

Harry C. Todd has been made manager of advertising and sales promotion for the corporation. For the last 19 years he has been assistant sales manager of the Calcium Chloride Division.

Expanding Activities of National Water Main Cleaning Co.

Clinton Inglee, president of the National Water Main Cleaning Co., announced recently the removal of its offices to larger quarters at 50 Church St., New York City. The activities of the firm have expanded so much that more space is needed to accommodate additional personnel. The company has become almost "international" in scope with several newly appointed representatives and recent contracts in Newfoundland, Panama Canal Zone, and Puerto Rico.

Clinton Inglee

J. A. Frank, recently promoted to chief engineer and field manager will devote a considerable part of his time to travelling in the interests of the company and acting as the firm's representative at conventions.

Mrs. C. L. Wright, assistant general manager and secretary, will continue in charge of the office and personnel until Mr. Inglee, who is recovering from a recent illness, can resume his former activities in the firm.

This PARK-O-METER COLLECTOR Will Pay For Your Meters...

Your Park-O-Meter installation provides a complete modern service. All operation details are considered with the view to providing reliable economic operation. Park-O-Meter provides adequate coin capacity, accurate revenue registration, automatic coin dumping. These, coupled with the coin collector, cut operating costs to a point where savings will pay for the meter system in a few years.

THIS COIN COLLECTOR AVAILABLE TO EVERY PARK-O-METER CITY

Collection operation completed with a single quick motion

WRITE FOR FACTS AND FIGURES

Magee-Hale PARK-O-METER COMPANY

COMMERCE EXCHANGE BUILDING • OKLAHOMA CITY 2, OKLAHOMA

MACNICK COMPANY, *Manufacturers*, TULSA, OKLAHOMA

LeTourneau Completes Domestic Sales Organization

R. G. LeTourneau, Inc., Peoria, Ill., recently announced the completion of its domestic sales organization comprising 57 exclusive distributors. These firms will provide sales, service, and parts facilities to earthmoving and construction owners and users throughout the United States and Canada.

G. S. McKenty

"Our newly completed organization of exclusive distributors is really one to be proud of," asserts G. S. McKenty, LeTourneau general sales manager. "They have . . . already produced sufficient business to keep all of our plants in full production through 1946."

This newly-formed sales structure was developed under a sign-up program inaugurated in February 1944. Selected from among the country's outstanding equipment dealers, the companies were given comprehensive operation instructions, including a graphic training presentation by factory representatives at each distributor's showroom, and intensive, specialized training courses given sales, service, and parts personnel at factory training schools. The various firms are kept in touch with the factory by LeTourneau district sales representatives and servicemen.

Maxim Silencer Handles New England Business from Hartford

All business of the Maxim Silencer Co., 85 Homestead Ave., Hartford, Conn., will be handled directly from the main office in Hartford, according to a recent announcement. Those in Boston proper may call the factory in Hartford, free of charge, by merely dialing the operator and asking for Enterprise 1200.

Welsbach Wins St. Louis Lighting Maintenance Contract

A 3-year contract for the maintenance of its city-owned street lighting system has been awarded by the Board of Public Service, St. Louis, Mo., to The Welsbach Street Lighting Company of America, subsidiary of Welsbach Engineering and Management Corp., 1500 Walnut St., Philadelphia 2, Pa.

Arthur B. Shaw has been appointed western division manager with headquarters in St. Louis to operate this contract. He was formerly Philadelphia district manager.

Consulting Engineers Open Columbus Office

Alden E. Stilson & Associates, Ltd., consulting engineers, announced recently the opening of offices at 630 East Broad St., Columbus, Ohio, for practice in the fields of waste disposal, sewage treatment, water supply, as well as surveys and design.

It was also announced that T. W. Cadmus became a member of the firm.

Emulsified Carbon Black Reduces Traffic Hazards

Carbon Dispersions, Inc., a newly formed organization at 27 Haynes Ave., Newark 5, N. J., is offering Black Shield, a colloidal dispersion of pure carbon black for producing soft tones of gray or black in concrete roads.

Meeting state specifications, this product helps eliminate road glare, White markers and guide lines are easier to see by day or night on black or grey concrete roads which have been colored with Black Shield.

Dr. Arthur Brauch, vice-president and general manager in charge of plant operations, points out that concrete roads containing Black Shield offer the advantages of good riding surface, resistance to wear, low cost of upkeep, elimination of hazardous glare and ugly oil stains that are noticeable on the surface of normal colored concrete.

CASE HISTORY No. 7

Water Softening Plant, Fremont, Ohio

A SOFTENING PLANT

Wm. H. Schneider, Supt. & Chemist

Water Filtration Plant, Fremont, Ohio

"The City of Fremont, Ohio located on the Sandusky River in North Central Ohio, in the year of 1928 designed and built a water softening plant to handle 3,000,000 gallons of water per day. The plant was planned to soften and purify the very flashy Sandusky river water, with a turbidity reaching 3,000 p.p.m. and hardness up to 660 p.p.m.

"The plant was of a conventional design, employing Lime and Soda Ash for softening and Alum for coagulation. Trouble was encountered in forming a satisfactory floc in the colder months, especially with high turbidities. As the city grew and the demand increased, it was necessary to find a remedy for this condition, and after running laboratory tests indications were that an iron salt would give better results. An old feeder was converted so as to make it possible to run a plant scale test, using FERRI-FLOC.

"The conclusions reached from this plant test prompted our purchasing new feeding equipment suitable for feeding FERRI-FLOC. As a result of this change, we have secured a more satisfactory finished water throughout the entire year.

"Our thanks to the Technical Staff of the Tennessee Corporation for their assistance in solving our problem."

(signed) Wm. H. Schneider

TENNESSEE CORPORATION

Manufacturers of Ferri-Floc

Atlanta, Georgia **Lockland, Ohio**

HERCULES Dur

HOLD IT! this looks interesting!

There's Something Unusual about this Garbage Body!

Here's the economical answer to the problem of hauling and dumping garbage . . . the Hercules Low-Mount Garbage Body, built right down to working height to help get the job done faster and better. Like all Hercules Hoist and Bodies, the Low-Mount has been designed and built to do a specific job. In this case, it's the unusually low mounting height that provides efficient, speedy service.

Your sanitary department employees will work faster and do a better job with a Hercules Low-Mount because there's less effort required to load . . . and the Hercules Twin Direct-Lift Hoist makes short work of dumping even the biggest loads. Braced side rub rail body is available with hinged extension sides and superstructure for tarpaulin. The Low-Mount is also available with hinged steel covers or with scow end as shown in illustration above.

If you're looking for the economical answer to this difficult hauling and dumping problem, the Hercules Low-Mount can meet all requirements. Complete information, available without obligation, will be sent on request. Address Dept. J, Hercules Steel Products Company, Galion, Ohio.

HERCULES HOISTS *and* BODY UNITS *for Every Type of* Sanitary Service

HERCULES
DUMP BODIES AND SPLIT SHAFT POWER TAKE-OFFS • HYDRAULIC HOISTS • COAL CONVEYORS

HERCULES STEEL PRODUCTS COMPANY . . . GALION, OHIO

Allan S. Harrison, William F. R. Ballard, and Frederick H. Allen members of the new private independent housing consulting firm to expedite post-war construction

New Firm of Housing Consultants

Harrison, Ballard & Allen, 123 E. 77th St., New York 21, N. Y., is a new private organization in the housing field. The partners in the firm are Allen S. Harrison, former Director of Public Housing for the city of New York; William F. R. Ballard, architect, retained by the New York City Housing Authority on several of its larger projects; and Frederick H. Allen, former deputy mortgage officer of the Bowery Savings Bank, New York. They will act as consultants to cities with established housing authorities or will undertake any part of housing functions for municipalities building for the first time.

Should the Wagner-Ellender-Taft bill, which is designed to stimulate construction and housing studies on the part of municipalities, become law, Harrison, Ballard and Allen will be available to assist cities in meeting such of its provisions as surveys of local needs and the coordination of housing construction with other city planning. The principals in the new firm have been responsible for almost $200,000,000 of housing construction, and have made numerous surveys of real estate and housing problems, cost and maintenance studies, and mortgage analyses. Their service will coordinate all functions in connection with housing construction, from inception of the project to setting up of management staffs, thus relieving the municipality or private investor of all or a part of responsibility and details of construction, according to the clients wishes.

Rockwell Makes Personnel Promotions

A. J. Kerr has been elected vice-president of sales of the Rockwell Manufacturing Co., 400 North Lexington Ave., Pittsburgh 8, Pa., according to an announcement by Col. Willard F. Rockwell, president and chairman of the organization.

Mr. Kerr, formerly general sales manager, has been associated with the company for more than 20 years. His early career was as district manager, in Tulsa, of the Pittsburgh Equitable Meter and Nordstrom Valve companies, now divisions of the Rockwell Manufacturing Company. In 1944 he was made general sales manager.

As vice-president of sales, Mr. Kerr will coordinate the marketing activities of the various subsidiaries and divisions. These include Pittsburgh Equitable Meter Division, Nordstrom Valve Co., Rockwell Machine Co., The Delta Manufacturing Co. The V & O Press Co., Edward Valves, Inc., The Crescent Machine Co., Rockwell International Corp., Monessen Foundry and Machine Co., and Arcade Manufacturing Division.

William A. Marsteller has been appointed General Advertising Manager His duties will be of a cordinating and directing nature.

Mr. Marsteller has been Vice-President in charge of sales, advertising, and industrial relations of Edward Valves, Inc., East Chicago, Ind., a subsidiary of The Rockwell Manufacturing Co.

He is president of the Chicago Industrial Advertisers Association and a Director of the National Industrial Advertisers Association and the Chicago Federated Advertising Club.

In addition the acquisition of the Arcade Mfg. Co., Freeport, Ill., by the Rockwell Manufacturing Co., has been announced by Col. Willard F. Rockwell, president.

The line of the Arcade Mfg. Co., established in 1885, has been extended to a point where it now has more than 300 items, and the manufacturing emphasis is on foundry equipment, hardware for the refrigeration industry, and miscellaneous cast iron and wood toys. Present management of the company will continue except for L. L. Munn, president for many years, who will retire in the near future.

INSTALLATIONS WORLD WIDE

LARGEST CITY TO SMALLEST VILLAGE

VALVES COMPLETE EQUIPMENT FOR WATER WORKS FILTRATION AND SEWAGE DISPOSAL PLANTS LATEST "COREY TYPE" HYDRANTS

Write for Catalogue and Information

IOWA VALVE CO.

General Offices:
Hubbell Bldg., Des Moines, Iowa

Plant:
Oskaloosa, Iowa

TRINITY STRAIN

Creeping Fescue

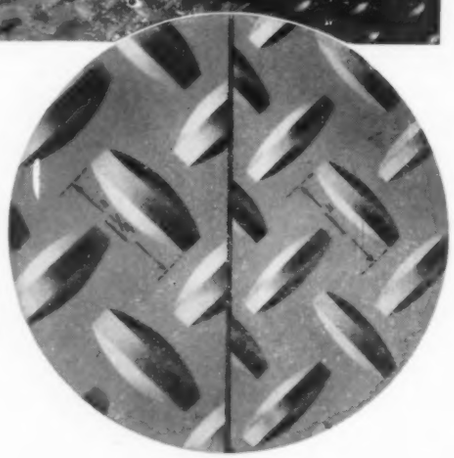
Now Commercially Available

Write today for further information

THE BELT SEED CO., Baltimore 2, Md.

PREVENT these Accidents

Get *SAFE, SURE* Footing with INLAND 4-WAY FLOOR PLATE



In stock at eleven Ryerson plants are the two pattern sizes shown at the right. Projections are 1 ¼" long on the large pattern and 1" long on the small. Other products in stock include: bars, structurals, plates, sheets, tubing, alloys, Allegheny Stainless, etc.

About 150,000 men and women are injured every year by slipping and falling accidents in industry! But you can guard against these accidents in your plant. With Inland 4-Way Floor Plate on floors, stairways, loading platforms, walkways, etc. you get very safe traction and long wear. When you order from nearby Ryerson stocks, plates are delivered quickly, accurately cut and ready for installation.

Wherever sure footing is important, Inland 4-Way Floor Plate should be used. Projections, covering more than one third of the area, center on one another at right angles, giving 4-way protection against slipping—forward, backward, to the left or right. Because Inland floor plate is made of tough rolled steel, it is structurally strong and long wearing.

Ryerson has two pattern sizes and many thicknesses in stock, plus facilities for cutting to square or irregular shape. For quick delivery, contact the plant nearest you. *Inland 4-Way Floor Plate Catalog sent on request.*

Joseph T. Ryerson & Son, Inc. Steel-Service Plants at: Chicago, Milwaukee, Detroit, St. Louis, Cincinnati, Cleveland, Pittsburgh, Philadelphia, New York, Boston, Buffalo.

RYERSON STEEL

Ahrens-Fox Resumes Fire Equipment Production

The Ahrens-Fox Fire Engine Corp., Cincinnati, Ohio, is again in regular production on fire fighting equipment after having fulfilled its wartime contracts for the armed forces. Operating in a modern new plant greatly enlarged during the war, the company is even better equipped than before for the production of new equipment and to service the Ahrens-Fox apparatus already in use throughout the United States.

CARLSON PORTRAIT
H. R. LeBlond

R. N. Smith

Officers of the corporation are Harold R. LeBlond, president and treasurer; Edward G. Schultz, vice-president; and Frank Stenger, secretary.

The management announces the appointment of R. N. Smith as an officer and general manager of the corporation. Mr. Smith had worked with the organization from 1925 to 1941. Since the latter date, Mr. Smith has been with Mack-International Motor Truck Corp., serving as Northeastern Division Fire Apparatus Manager.

Meter Sales Manager for M. H. Rhodes

D. E. Crooker of Ontonagen, Mich., has been appointed sales manager of the Parking Meter Division of the M. H. Rhodes Co., 30 Bartholomew Ave., Hartford, Conn., manufacturers of Mark - Time parking meters.

D. E. Crooker

Mr. Crooker has served as president of the village of Ontonagen for a five-year term; as commissioner on the Michigan Board of Aeronautics for a two-year term. He operates an automobile agency at Ontonagen for the past 25 years, for several years sold fire department supplies to municipalities, and since V-J Day has been a distributor of Mark-Time meters in Michigan.

Personnel Changes at IBM

James W. Birkenstock has been promoted to the position of general sales manager of the International Business Machines Corp., World Headquarters Bldg., New York 22, N. Y. He was previously a special sales executive at the world headquarters.

Other promotions included the following:

Gordon P. Lovell, formerly manager of electric accounting machine sales in Dayton, Ohio, has been appointed to a similar position in the New York office. Maurits C. Boas has been made special representative and assistant to C. A. Kirk, executive vice-president on foreign operation matters. He was for many years head of the IBM organization in Holland and manager of the IBM special methods research department in New York from 1940 until his present promotion.

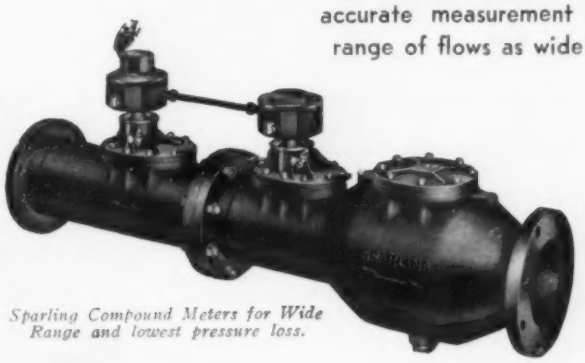
Allen W. Lishawa, Jr., formerly a special representative, is now manager of the IBM special applications department, following his release from military service with the rank of colonel.

Serving LONG BEACH Since 1924

In the first year this West Coast city used Sparling Main-Line Meters, the Water Department installed twenty-two Sparlings—sizes 12-inch and 16-inch. Service and satisfaction is indicated by the installation to date of seventy-eight

SPARLING MAIN-LINE METERS

These meters, 4-inch to 30-inch, measure the flow from wells, to and from reservoirs, service to government establishments, use of Colorado River water, and so on. The list includes nine Sparling Compounds, where accurate measurement must extend over a range of flows as wide as 1 to 75.



Sparling Compound Meters for Wide Range and lowest pressure loss.

Our Bulletin 308 is yours upon request.

R. W. SPARLING

Manufacturer of Water Measuring Equipment

LOS ANGELES 54...Box 3277 Terminal Annex
CHICAGO 16 .....3104 South Michigan Ave.
622 Broadway.....CINCINNATI 2
101 Park Avenue.....NEW YORK 17
BOSTON 8.....6 Beacon Street

Original Woodcut by Lynd Ward

There's a solid satisfaction in specifying cast iron pipe. You know that your choice coincides with the judgment of leaders of your profession the world over. And when the line is backfilled, you are confident that it will serve throughout a long life at a low annual maintenance cost. This has been true of cast iron pipe for centuries; yet in the forty-odd years since our Company was founded, notable advances in manufacturing methods and controls have been made, resulting in a finer, more uniform pipe, either pit cast or centrifugally cast.

U.S. cast iron PIPE

U. S. PIPE & FOUNDRY CO.
General Offices: Burlington, N. J.
Plants and Sales Offices throughout the U. S. A.

Capt. White Returns to White Mfg.

W. McKean White, Jr., has been honorably discharged as a captain in the Army Air Force and appointed a captain in the Air Reserve. He has returned to his pre-war position as vice-president of the White Manufacturing Co., Elkhart, Ind.

W. McKean White, Jr.

During the war Capt. White served two years in England with the 8th Air Force. He was an engineering officer, and eventually became group equipment officer of the 384th Bombardment Group. In this capacity he had charge of air-sea rescue work and supervision of emergency flying equipment. After V-E Day he was transferred to the Occupational Air Force and operated out of Marseilles, France, where he was concerned with preparation of U. S. soldiers for flight back to the Zone of the Interior.

As vice-president of White Mfg. Co., he will be active in engineering and production problems as assistant to his father, W. McK. White, president. This company produces front-end loaders for industrial tractors, concrete vibrators, asphalt heating kettles, stone and sand dryers; and switch heaters, side bearings and heat-treated truck parts for railways.

Considerable new machinery has been installed recently to cope with a large backlog of orders and additional employees taken on.

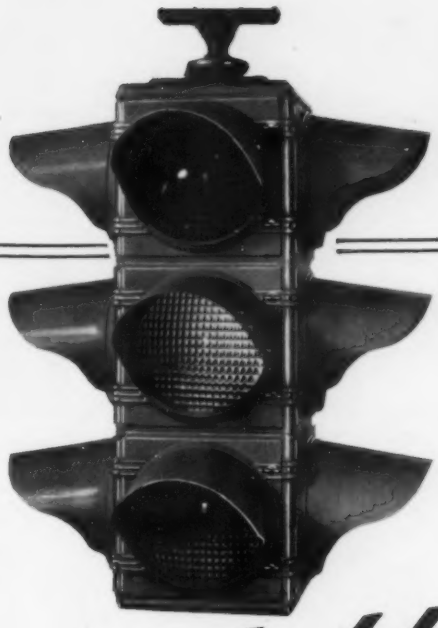
Greeley and Hansen Moves Office

Greeley and Hansen, engineers, announces the removal of its Chicago office from 6 North Michigan Ave., to 220 South State St., Chicago 4, Ill. The telephone is Webster 7740.

Price Control Suspended From Valves and Hydrants

As of December 31, 1945, former price controls have been suspended from valves, hydrants, pipe fittings and other related equipment, according to SO 129 issued by the Office of Price Administration. Manufacturers who plan to increase prices are required, under the order, to submit revised price lists to OPA.

Most manufacturers indicate that they do plan to increase prices and state that they have sustained average wage increases of 46.4% since 1941. Many of the leading manufacturers of valves are now closed by strikes for further wage increases.



Safeguard Traffic with AUTOFLOW

Dependable Safety

Dependability . . . modern streamlining . . . sectional construction . . . minimum maintenence. These are the features which are winning municipal approval for the new AUTOFLOW everywhere.

This versatile signal unit fills the bill for any traffic requirement. Interchangeable sections can be made up into any combination traffic signal desired.

Inspections and service adjustments made without the use of tools. Adapted to span-wire, mast-arm, bracket, or pedestal mounting.

These and other features make AUTOFLOW the most practical traffic signal ever built.

Write for further information and specifications

SOUTHERN SWITCH & SIGNAL CO.

SHREVEPORT, LOUISIANA

"Progress forgot my address"...

"I hear a man can fly half-way across the country nowadays in four hours. Funny . . . it takes me almost that long sometimes to haul my crops twenty miles to the railroad siding. Nasty weather I can't get there at all—the road's that bad. Progress? Sometimes I wonder . . ."

Maybe you've wondered, too, about the condition of America's country roads. These roads—2,400,000 miles of them—serve 6,000,000 farms. They link rural Americans with their schools, churches, markets, neighbors. Yet, more than half of them have no surfacing of any kind, and over one-third are still classed as *primitive*.

True progress calls for planned maintenance and improvement of this vital road network. Barrett Tarvia*, a serviceable and economical road tar, can help—as it has helped in the past. Why not discuss your road problems with the Tarvia field man?

THE BARRETT DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 RECTOR STREET, NEW YORK 6, N.Y.

New York · Chicago · Birmingham · St. Louis · Detroit · Philadelphia Boston · Rochester · Minneapolis · Cleveland Columbus · Toledo Youngstown · Syracuse · Buffalo · Cincinnati · Bethlehem · Portland, Me. Bangor, Me. · Norwood, N.Y. · Oneonta, N.Y. · Elmira, N.Y. Cromwell, Conn. · Norwich, Conn. Savannah, Ga. · In Canada: THE BARRETT CO., LTD. · Montreal Toronto · Winnipeg · Vancouver

*Reg. U. S. Pat. Off.

Barrett Tarvia*

W. C. Brown, Jr.

Louie M. Preedom

H. B. Brown

Veteran Sales Personnel Return to Neptune

Neptune Meter Co., 50 W. 50th St., New York 20, N. Y., announced recently several additions to its sales staff.

Louie M. Preedom has joined the company as sales engineer with headquarters at the Dallas office. Mr. Preedom is a veteran of World War II, having served in the U. S. Army for five years and attained the rank of major. During nine months overseas he earned the Bronze Star. Prior to the war he was for three years with the Purchasing Department of Yale & Towne in Stamford, Conn.

Herbert B. Brown has returned to the Chicago branch from active duty as a captain with the 23rd Tank Destroyer Group No. 9. During his six years with the company before joining the army he was service manager at the Chicago office and was promoted to sales engineer for the Chicago area.

W. Creighton Brown, Jr. has also rejoined the sales staff after over three years with the army, 20 months of which were overseas with the 8th Field Artillery. His territory will be the state of Missouri with headquarters at the Kansas City office. For five years prior to joining the army, Mr. Brown was a sales engineer with Neptune in the state of Nebraska.

H. C. Maurer Dies

H. C. Maurer, president of National Clay Pipe Manufacturers, Inc., and president of the Clay Sewer Pipe Association, died in Columbus, Ohio, recently at the age of 53.

In connection with his leadership in these two organizations, Mr. Maurer had become one of the best known men in the industry and exercised a strong influence in its affairs. He had previously been president and general manager of the Sewer Pipe Manufacturers of Uhrichsville, Ohio; vice-president and sales manager of Universal Sewer Pipe Co., Cleveland; sales manager of the American Vitrified Products Co., Akron, Ohio, and had served in executive capacities with the Dunlop Rubber Co., Buffalo, and the McGraw Motor Co., Wheeling, W. Va.

Engineer Appointed by Ranney Method Water Supplies

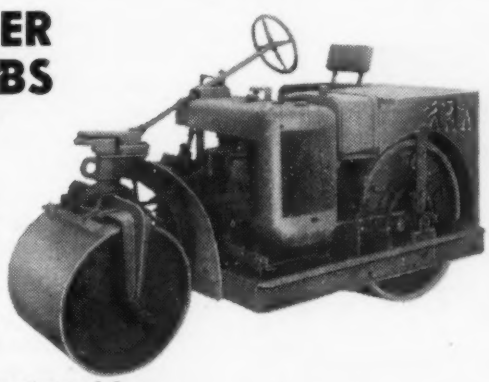
Ralph G. Kazmann has joined the technical staff of Ranney Method Water Supplies, Inc., 1412 Heyburn Bldg., Louisville 2, Ky., as hydrologic engineer, according to A. d'Audiffret, chief engineer. Mr. Kazmann will be in charge of water supply investigations and research.

He was formerly associate engineer with the Ground Water Division of the U. S. Geological Survey.

A TOUGH ROLLER FOR TOUGH JOBS

Pierce-Bear 3½-5 Tons, Variable Weights

Engineered for economical operation where the going is tough. Compact, easy to operate. Rear roller gives heavy duty compression. Built-in water tanks for wet rolling. Powered with Allis-Chalmers Industrial Heavy Duty Model "B" gasoline engine. Write for details.



Manufactured by

H. W. LEWIS EQUIPMENT COMPANY

415-431 Hoefgen Ave. SAN ANTONIO 6, TEXAS Phone Garfield 6137 or 8931

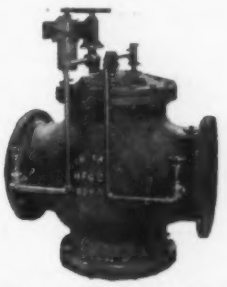
ROSS Automatic Valves

Also manufacturers of float valves, pressure-reducing valves, relief valves and back pressure valves.

No distribution system is better than the valves that control it—

ALTITUDE VALVES for Control of elevation and heads into and out of tanks, basins and reservoirs.
1. Single acting.
2. Double acting.
3. Combination assembly for three or more automatic operations.

COMBINATION VALVE
Combination automatic control both directions through the valve.
A self-contained unit, with three or more automatic controls.

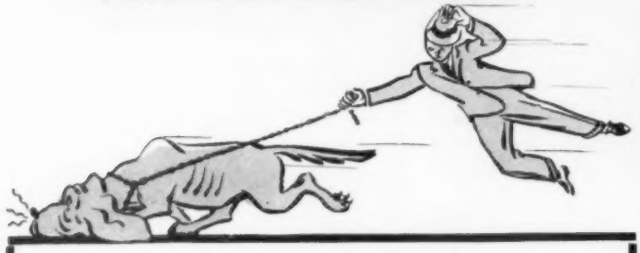


REMOTE CONTROL VALVE
Electric remote control—solenoid or motor can be furnished.
Adapted for use as primary or secondary control on any of the hydraulically controlled or operated valves.

Write today for catalogs and details to fit your particular system.

ROSS VALVE MFG. CO.
INCORPORATED
P. O. BOX 596, TROY, N. Y.

TRACKS DOWN WATER WASTE FOR NATIONALLY KNOWN MANUFACTURER

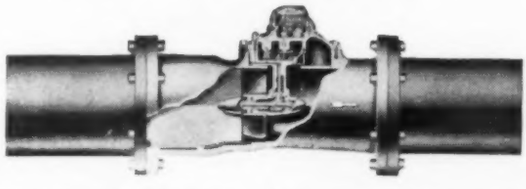


A large manufacturing plant never knew how much water it wasted until a Builders Propeloflo Meter was recently installed. The 8" line, previously unmetered, supplied water at 70 lbs. per sq. in. for continuous blowdown, cooling heat exchangers, washing down the boilers, cooling the bearings of coal feeders, etc. When this Propeloflo Meter showed that an excessive amount of water was being used . . . between 7 and 8 million lbs. of water per 24 hrs. . . . a new boiler room routine was adopted which effected large savings.

The Propeloflo Meter tracks down waste and is successfully used for metering lines carrying hot or cold water . . . as well as other free-flowing liquids such as clear effluent from sewage and trade waste treatment plants. Its streamline Venturi design creates uniform velocity distribution and gives exceptional accuracy through a wide range of flow with low loss of head. The Propeloflo is complete in itself and easily installed in any pipe. For Bulletin 350A, address Builders-Providence, Inc., (Division of Builders Iron Foundry), 18 Codding Street, Providence 1, R. I.

Auxiliary Equipment and Secondary Instruments

Cable Operated Totalizer, Indicator, Recorder
Cable Operated Totalizer
Electrically Operated Totalizer, Indicator, Recorder
Electrical Contact for Batch Control
Treet-O-Control for Chemical Proportioning
Solid extension for counter where meter must be located below floor or ground level.



The Propeloflo is a product by the makers of the famous Builders Venturi Meter, Rate Controllers and Filter Gauges.

BEFORE YOU BUY *ANY* FLOW METER, CHECK WITH BUILDERS

BUILDERS—PROVIDENCE

BUILDERS

VITAL BOOKS on CITY PLANNING AND HOUSING

THE ART OF BUILDING CITIES

By CAMILLO SITTE. *Translated from the German by Lt. Charles T. Stewart, U.S.N.R., Former Director, The Urban Land Institute.*

Available for the first time in English, this classic in its field will prove indispensable for officials concerned with the improvement of housing and the development of the better-planned cities of the future. The author discusses the modern problems of city building according to basic artistic fundamentals. The growing interest in slum clearance and general reconstruction of cities to provide more hygienic as well as more artistically satisfactory living conditions makes its appearance at this time doubly significant. Thoroughly modern and constructive in its approach, practical in its viewpoint, and architecturally sound.

130 Pages Illustrated $5.50

WATCH FOR THESE IMPORTANT BOOKS FOR CITY PLANNERS

Coming in March

NEW CITY PATTERNS

By S. E. SANDERS, *Director, City Planning Research, FWA, PBA, Washington, D. C.*, and A. J. RABUCK, *City Planning Research, PBA, Washington, D. C.*

A thoroughly practical and realistic treatment of urban design problems, featuring able discussions of the organization of metropolitan planning commissions, and the exact methods to be followed to insure that each new development or improvement shall coincide with a carefully predetermined plan. All those engaged in planning or in the technological application of plans, will find this book invaluable. Contains important discussions on parks, greenbelts, wedges, playground and community shopping and parking areas, with careful attention to traffic problems.

About 200 Pages Illustrated $7.50

Coming in April

HOUSING AND CITIZENSHIP

A Study of Low-Cost Housing

By MAJOR GEORGE HERBERT GRAY, F.A.I.A., A.I.A., *Consultant in Architecture and City Planning.*

Based on the thesis that healthy and responsible citizenship is dependent on adequate living accommodations for all the people, this vital new book presents a sound, well-coordinated plan for low-cost housing development in the United States. The author attacks the problem of rents in an intelligent, vigorous manner, and discusses all the sociological implications of the "ill-housed third" of our population. He offers a thorough and comprehensive analysis of the factors involved in a well-balanced plan for our future urban and rural redevelopment.

About 250 Pages Illustrated $6.50

Send Today for New Free Catalog, "Let's Look It Up" (over 200 Titles)

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330 West 42nd Street New York 18, N. Y.

Also publishers of Chemical Engineering Catalog, Metal Industries Catalog, Materials & Methods, (formerly Metals and Alloys) and Progressive Architecture—Pencil Points.

Simpson Honored by Mueller Co.

J. W. ("Bill") Simpson, Vice-President in charge of Sales for the Mueller Co., Decatur, Ill., was recently honored at a gathering of company employees in recognition of his forty-five years service with the company, and presented with a pin by W. E. Mueller, president.

J. W. Simpson

Bill Simpson, who is widely known throughout the water, gas, and plumbing trades, began his service with Mueller in 1899 as a messenger boy. He was advanced through the various departments, and in 1916 was serving as assistant to the president. The following year he was made sales manager and subsequently vice-president. Since 1917 he has capably guided the sales division through two wars and a depression. Today he is vigorously attacking present sales problems with undiminished enthusiasm.

Kinner Motors Is Now Gladden Products Corp.

Kinner Motors, Inc., Glendale, Calif., has changed its name to the Gladden Products Corp. W. P. Stratton will remain as general sales manager and advertising manager; S. Kenneth Weiser has been promoted to assistant sales manager and will continue to serve as service manager.

Mr. Stratton has been on the Pacific Coast since 1938. He has served in various sales and engineering capacities with the Bassick Co., and Godfrey Rueger Co., manufacturers representatives. He is now building a distributor organization to handle Gladden's line of small horsepower industrial engines. Mr. Weiser has had wide experience in aircraft, diesel, and gasoline engine fields.

Buffalo-Springfield Elects New Vice-President

J. F. Harrison, chief engineer and works manager, has become vice-president in charge of engineering and manufacturing at the Buffalo-Springfield Roller Co., Springfield, Ohio. Mr. Harrison, in the enginering field for more than 23 years, holds many patents on construction equipment and has been directly associated with the pioneering of many new developments in the construction equipment industry. He joined the company in 1941 and before that was associated in engineering capacities with other construction equipment manufacturers.

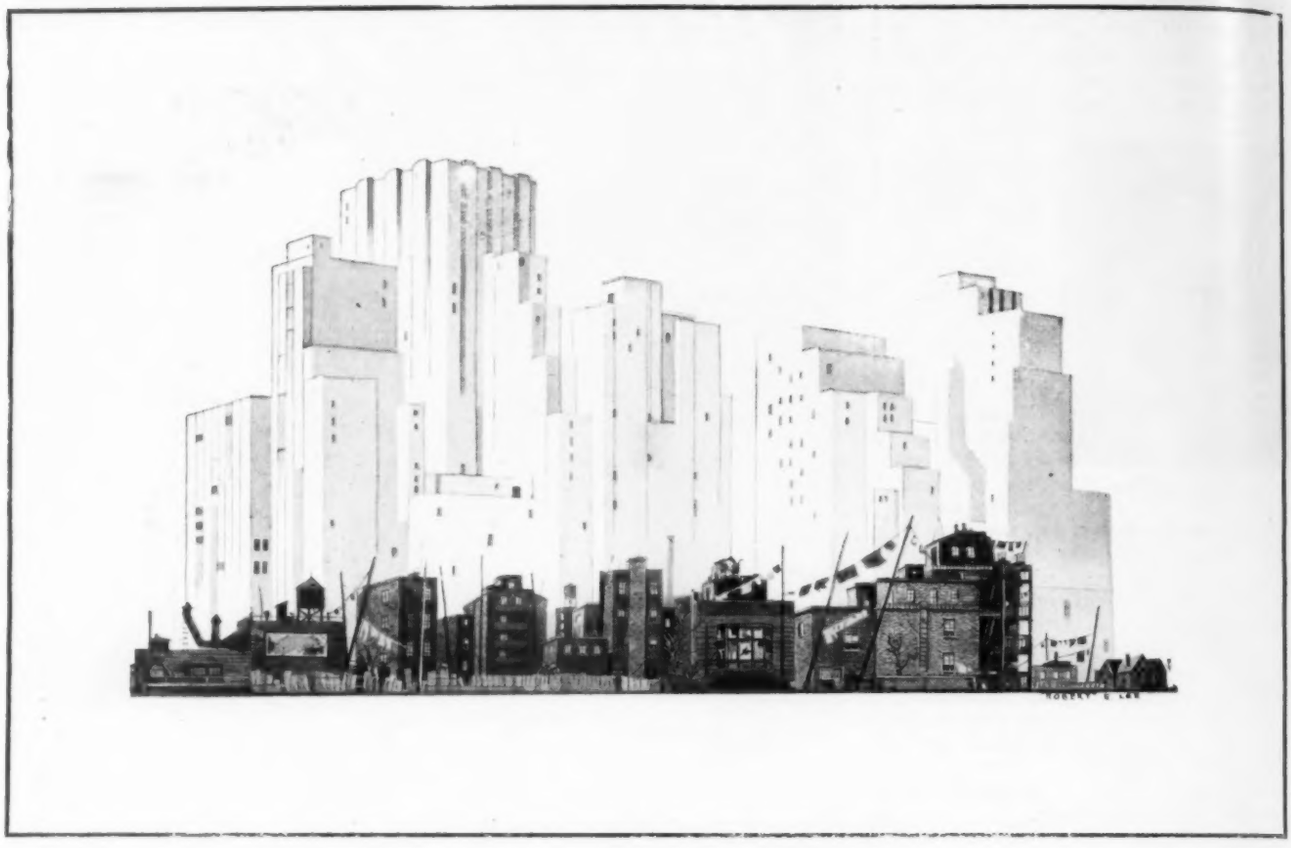
for their lasting performance

● The seal that keeps the water in and the air out consists of two wearing surface seal rings made of Tungsten Carbide and a grease container. One seal ring rotates on the shaft and is held in contact with the stationary ring by a stainless steel spring. This method of sealing is specially suited for high pressure work and when handling dirty water—the higher the pressure the tighter the seal. Dirty water cannot get into the grease and damage the shaft and bearings. Air is kept out of the pump so there's no loss of vacuum and high priming efficiency is maintained.

For details, see your local Carver distributor or write direct.

THE CARVER PUMP CO., Muscatine, Iowa

CARVER CENTRIFUGAL Certified PUMPS



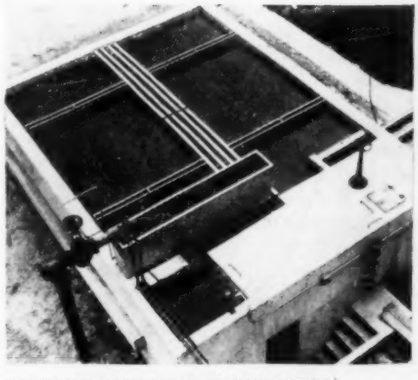
Where's the water going to come from?

FOR the housing development that is to rise on the slum clearance site . . . for the municipal swimming pools . . . the new industries—for the scores of demands soon to be made on the water supply of the postwar community, better water and, quite probably, *more* water is going to be needed.

The ideal water for industry and householder, of course, is soft . . . clear . . . iron-free. Permutit* equipment provides this kind of water. When space is at a premium, compact Spaulding Precipitators or Spiractors not only offer the most modern form of lime soda treatment, but cut space requirements to one half or even one *quarter* of older style water treatment plants.

Find out how Permutit can serve your community. Full particulars will be furnished gladly to you or your consultants. Write to The Permutit Company, Dept M-3, 330 West 42nd Street, New York 18, N. Y. or Permutit Co. of Canada, Ltd., Montreal.

*Trademark Reg. U. S. Pat. Off.



PERMUTIT SPAULDING PRECIPITATOR removes water hardness, dirt and color by the sludge blanket process. This new-design equipment cuts detention time, saves chemicals, takes only half the space of former methods. Present installations handle up to 120,000,000 gallons daily.

PERMUTIT

WATER CONDITIONING HEADQUARTERS

The largest and the smallest of International's tractors. The TD-24, approximately 35,000 pounds in weight, alongside the Farmall Cub, weighing approximately 1,050 pounds

Large Crawler Tractor Introduced by International

International Harvester Co., 180 No. Michigan Ave., Chicago 1, Ill., announced at the recent Associated Equipment Distributors' meeting in Chicago a new diesel crawler tractor in the 130 drawbar horsepower range. It weighs approximately 35,000 pounds and is the largest tractor ever built by the company.

Features of the new tractor include a new arrangement which gives the operator easy and positive control of the tractor; use of special sealing and anti-friction bearings in track rollers, which greatly extends the track roller lubrication period; and convenient mounting for all types of allied equipment. Additional contributions to driver comfort are the wide seat and convenient controls. Eight speeds, from 1.6 to 7.8 mph give the big tractor great flexibility on all jobs.

A new International six cylinder, full-diesel engine powers the TD-24. This engine will have the International built-in gasoline starting system which, together with an electric starter assures easy starting in all weather conditions.

Production of the TD-24 will be a function of International's new Melrose Park works which has more than two million square feet of floor space. Since the plant will not be ready for use until the latter part of the year, it will be some time before the tractor will be available for sale.

Pitometer Co. Makes Organization Changes

The Pitometer Co., 50 Church St., New York, N. Y., water distribution engineers, recently made several changes in its organization.

Edward S. Cole, who developed the Pitometer 50 years ago, resigned as president, a position he has held since 1915. He will continue his connection with the company as consulting engineer.

Egbert D. Case, associated with the company since 1914, is the new president. He was formerly vice-president and general manager.

E. Shaw Cole has been elected vice-president and chief engineer with headquarters in New York, and Cyrus R. Bird has been named vice-president and Western manager with offices in Chicago.

New Firm of Experienced Management Engineers

Three recently discharged army and navy officers have announced the formation of a new firm to engage in management engineering and business surveys. The partners of the firm are Col. Mark W. Cresap, Jr., Commander Willard F. McCormick, USNR, and Captain Richard M. Paget, USNR.

Mr. Paget as a captain was chosen in 1942 by Secretary Frank Knox to be management engineer of the Navy Department. Formerly he was a partner of Booz, Allen & Hamilton, management engineers.

Mr. McCormick, as a commander was assistant management engineer of the Navy Department. From 1938 to 1942 he was management engineer of the United States Steel Corporation. For 14 years prior to 1938 he was with Remington Rand Inc., engaged in organizational and procedural analysis.

Mr. Cresap as a colonel was in charge of administrative management for the Commanding General, Army Service Forces, General Brehon Somervell, engaged in the improvement of organization and procedures in connection with the army logistics activities.

The new firm offers city governments a service of surveys and management counsel with emphasis on organizational problems and procedural studies. Address Cresap, McCormick and Paget, 120 Broadway, New York City.

The Ear That Locates Underground Leaks

GLOBE GEOPHONE

Locates leaks in water, air, and steam pipes quickly and accurately.

Many times the Geophone on one leak alone saves more than the cost of the instrument. Successfully used for 25 years by many Water Systems, Industrial Plants, and U. S. Government Plants.

No water system, industrial plant, institution having underground piping, water, air, or steam, can afford to be without a Globe Geophone in their Maintenance Department. One Water Service Company has over 39 Globe Geophones in use in their various systems. The Globe Geophone is a time and money saver. It conserves water and steam.

Price Complete with Leather Covered Carrying Case and Shoulder Strap... **$75.00**

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FIRE HOSE DRYER

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- Improves building design
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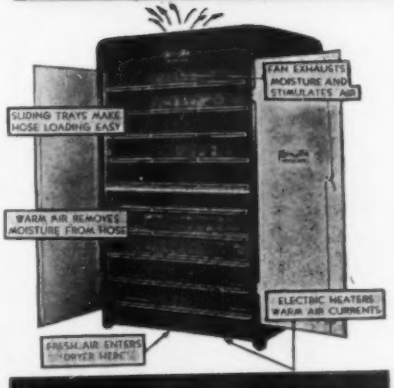
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And to insure years of uninterrupted operation, little trouble and low maintenance costs SEE to it that the name

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OUTDOOR DRINKING FOUNTAIN
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LARGE ANTI-FREEZING HYDRANTS 1½" TO 2" INCLUSIVE
SELF-CLOSING ANTI-FREEZING HYDRANT
"LOCK-LID" STREET WASHERS ¾" and 1" SIZES

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H. G. Sharpe

Graver Tank Appoints New General Manager

H. G. Sharpe has been appointed general manager of the entire operation of The Graver Tank and Manufacturing Co., East Chicago, Ind., according to a recent announcement.

Mr. Sharpe comes to Graver from the General Machinery Ordnance Corp., where he was production manager and later assistant general manager. In the 12 years following his graduation from the Sheffield Scientific School of Yale University he rose from apprentice machinist to production engineer with the Pierce Arrow Motor Car Co. He then joined the staff of Day, Zimmerman, Inc. of Philadelphia as consulting engineer and after several assignments in the United States organized their European subsidiary. Other connections included positions with the Cyclops Steel Co., Titusville, Pa.; Transue and Williams Steel Forging Corp., Alliance, Ohio, and the Hollow Steel Propeller Division, Curtiss-Wright Corp.

Hi-Way Service Now Known as Drott Mfg. Corp.

The Hi-Way Service Corp., 5141 North 35th St., Milwaukee 9, Wis., has changed its name to the Drott Manufacturing Corp., according to an announcement by E. A. Drott, president. This was done in order to identify the Drott products more easily with the manufacturer.

The following list of machines is manufactured by the organization at present: Drott bulldozers, Drott bull-angledozers, Drott Bullclam shovels, Drott Skid-Loaders, Drott Go-Devil tractor cranes, Drott Town Patrols, and Drott Hi-Lift loaders.

Capt. Snell Appointed by Luria Engineering Corp.

Bert L. Snell, honorably discharged recently as a captain in the Corps of Engineers, has been appointed Assistant Mid-Western Division Manager of the Luria Engineering Corp., 500 Fifth Ave., New York 18, N. Y., airport and industrial building specialists. His headquarters will be in the First National Bank Bldg., Chicago 90, Ill.

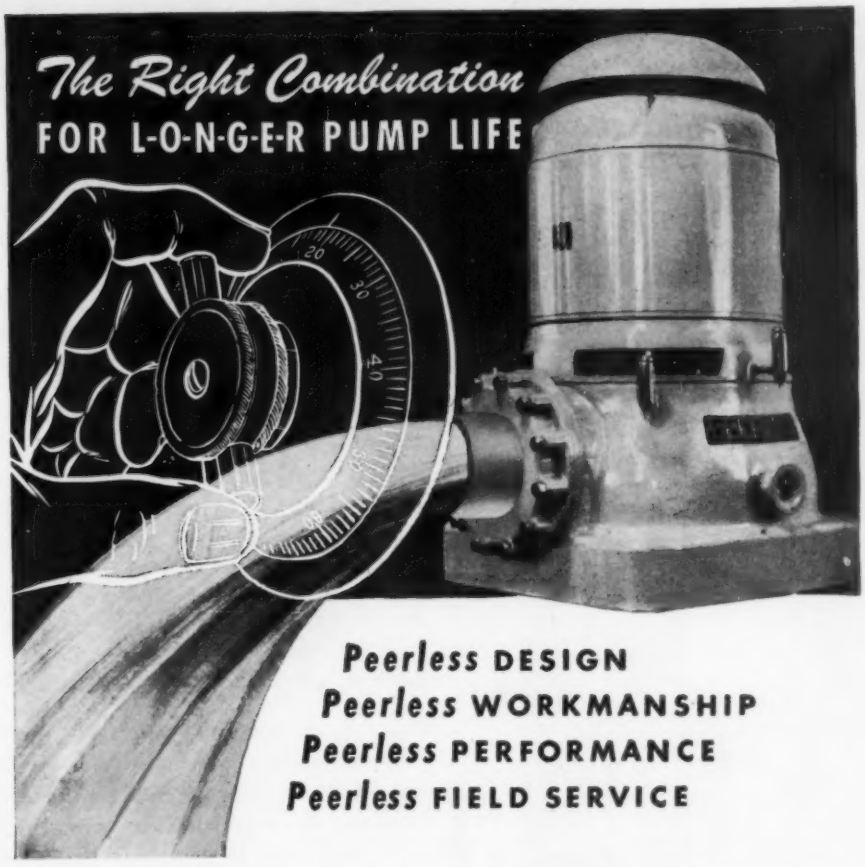
For 15 years prior to his tour of military duty he was employed by the Army Engineers in a civilian capacity in connection with engineering and construction work on the Missouri River.

General American Process Makes Personnel Changes

James A. Lane, formerly of the Chicago office of General American Process Equipment, a Division of General American Transportation Corp., 443 Baxter Ave., Louisville 4, Ky., has been transferred to the New York office at 420 Lexington Ave. as assistant to the sales manager.

Mr. Lane has had wide experience on equipment used in the sugar and mining industries, and before joining General American Process Equipment had been associated with both equipment manufacturers and sugar processers.

It has also been announced that James F. Olsen, formerly sales manager of Turbo-Mixer Corp., 247 Park Ave., New York, N. Y., a unit of General American Transportation Corp., has been transferred to the Chicago office of General American Process Equipment as manager of sales.



Behind the Peerless combination is safe pumping—the kind of operation that eliminates pump worries for years to come. Peerless Deep Well Turbine Pumps are foremost on the water front because of their traditionally better performance and greater dependability. Capacities: 15 to 30,000 gallons per minute. Peerless also manufactures a complete line of Domestic Water Systems, and Horizontal Centrifugal Pumps (formerly Dayton-Dowd).

Get in touch with the nearest Peerless distributor right now if you need a new pump during 1946. *He has interesting news for you.*

PEERLESS PUMPS

VERTICAL & HORIZONTAL

PEERLESS PUMP DIVISION
Food Machinery Corp.

FACTORIES
LOS ANGELES 31, CALIFORNIA
301 West Avenue Twenty-six
QUINCY, ILL. • CANTON 6, OHIO

FOR CONSTANT FULL FLOWING AND LIFELONG SERVICE!

● Copper Service Pipe connected with STREAMLINE SOLDER FITTINGS has been installed in hundreds of communities throughout the United States and Canada, from corporation to curb stop and on into the building. It has been providing peak service for many years and will for many years to come. STREAMLINE Copper Pipe and Solder Fittings combine the non-corrosive qualities of copper and bronze with the most modern and reliable method of water service installation on the market.

Rustable piping, which has been in service for a number of years, may outwardly still appear to be in fair condition, but it is almost a certainty that the walls of the pipe, in many places, have been so reduced by corrosion, that it is only a matter of time until failure occurs. More than that, the conducting area of the pipe has, in the great majority of cases, been greatly reduced by the accumulation of slime and corrosion.

An installation of STREAMLINE Copper Pipe and Fittings insures a constant full-flow of water from main to building. With the possible exception of abnormal earth or water conditions, it will last for generations.

Many municipalities throughout the country are now making plans for improvements or additions in their water systems as soon as Copper Pipe is again available. STREAMLINE Copper Service Pipe is the ideal material for water service lines and for many applications in filtration plants; in aeration lines and in heating coils using the sludge digestion system in sewage disposal plants—and, of course, for all general heating and piping purposes.

STREAMLINE
PIPE AND FITTINGS DIVISION
MUELLER BRASS CO.
PORT HURON, MICHIGAN

STREAMLINE

TRADE MARK REG. U. S. PAT. OFFICE

COPPER PIPE AND FITTINGS

Members of the committee who helped make the plans for the International Soap Box Derby: Left to right, C. P. Fisken, Adv., Mgr., Chevrolet Motor Division; J. W. Schlemmer, Akron Beacon Journal; B. E. Fulton, Manager, Akron Airport; J. W. Bostwick, Sound Arrangements; John T. White, Decorations; Austin Bender, Motion Pictures; E. W. Berger, Chevrolet Assistant Advertising Manager

Soap Box Derby Launched

First steps in the preparations for the All-American National and International Soap Box Derby, to be resumed this year after its discontinuance for the duration of the war, were taken recently at a meeting in Detroit. Members of the Finals Committee were principally concerned with rehabilitation of Derby Downs at Akron, Ohio, where the national and international championship finals will be held next August.

The committee recommended that work be started at an early date on reconditioning of the 1,000-foot strip of concrete track and all park facilities.

Sponsored by a number of newspapers and co-sponsored by the Chevrolet Motor Division of General Motors Corp., Detroit 2, Mich., and Chevrolet dealers, the Derby is recognized as a great international racing event. Its revival this year will mark the ninth running of this leading sports event for boys aged 11 to 15 years.

Concrete Pipe Association to Hold Annual Meeting

The American Concrete Pipe Association, 228 N. LaSalle St., Chicago, Ill., will holds its 38th annual convention in the Edgewater Beach Hotel, Chicago, April 11th and 12th, 1946.

The Board of Direction will hold a meeting in the hotel starting at 2 p.m. on April 9th and lasting through the 10th. The annual meeting will start at 10:00 a.m. on April 11th in the Michigan Room at which time nominations will be presented for new officers and board members. The new board will hold a short meeting at 10:00 a.m. on the 13th.

New Sales Engineering Firm in Charlotte, N. C.

A new firm of sales engineers has been organized under the name of Purser and London, Inc., by John R. Purser, Jr., and John B. London, well-known engineers of Charlotte, N. C. This organization will operate in North and South Carolina as representatives of Yeomans Brothers Co., Chicago, Ill.

Mr. Purser was formerly head of J. R. Purser Sales Engineer, Inc., founded in 1910 by his father; and Mr. London was recently returned to inactive duty with the rank of lieutenant commander after three years in naval aviation engineering.

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We are manufacturers, designers and specialists in the field of pump control. Send for Bulletins on any controls in which you may be interested.

TANKTROL—for elevated tanks, remote or nearby control by pressure. Bulletin T-11.

DUOTROL — for hydro-pneumatic (pressure) tanks. Control of both air and water volume. Bulletin D-6.

FLOAT SWITCHES — pump controls for tanks and sumps. Bulletin RO-3.

FLOATROLS — for open tanks and sumps. Single float, multiple circuit, sequence controls. Bulletin F-6.

SELECTROLS — for sewage disposal plants and water systems. Programmed multiple circuit operation. Bulletin S-7.

SPECIAL CONTROLS — for any unusual problem in water and sewage control. Write us your requirements.

AUTOMATIC CONTROL Company

1015 University Ave. St. Paul 4, Minn.

COPPER to IRON PIPE*

FEMALE CURB STOP

★The inlet end of this McDonald Curb Stop has a copper pipe coupling . . . the outlet end has inside iron pipe thread. It is a "Diamond" patent cap inverted key Curb Stop E-4711 for copper service pipe, round way, galvanized malleable tee handle. It is only one of the many waterworks goods items in the McDonald line . . . a name well-known to the trade since 1856.

EST. 1856 McDonald

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BRASS GOODS • PUMPS • OIL EQUIPMENT

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removes grounds for complaints

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KARPARK *Automatics*

KARPARK CORPORATION, CINCINNATI 6, OHIO

KARPARKS ARE MANUFACTURED BY THE HERSCHEDE HALL CLOCK CO.

TWO FAIR QUESTIONS

THE FIRST to the officials of the 3,500 Cities and Towns that have given up the paper ballot system of conducting elections and have installed Automatic Voting Machines—

"Would you willingly abandon your machines and return to the paper ballot with its slow and laborious voting, its spoiled and mismarked ballots, its arguments over the count, its delays in computing the returns and its costly recounts?"

We believe the answer would be a resounding "NO" for with voting machines:

THE VOTER CANNOT SPOIL HIS BALLOT.
THE VOTE IS ABSOLUTELY SECRET.
THE COUNT IS MECHANICAL AND POSITIVELY ACCURATE.
THE RESULT IS KNOWN WHEN THE POLLS CLOSE.
THE RECORD REMAINS, LOCKED AND SEALED.
EXPENSIVE RECOUNTS ARE ELIMINATED.
ELECTION EXPENSES ARE REDUCED.

THE SECOND to the officials of Cities and Towns still using the old "by hand" method of holding elections—

"Are you interested in learning how your community can have a better and less expensive system of voting?"

If you are, we shall be glad to send you detailed information on how the Automatic Voting Machine can produce these improvements.

AUTOMATIC VOTING MACHINE CORPORATION

Jamestown 55, New York

"Builders of Voting Machines Since 1898"

Mathieson Makes Appointments

John O. Logan has been appointed assistant general manager of sales of The Mathieson Alkali Works, 60 E. 42nd St., New York 17, N.Y., according to an announcement by G. W. Dolan, president.

John O. Logan

Mr. Logan, a graduate of Shurtleff College of Alton, Ill., has been with Mathieson since 1931 when he joined the organization as research assistant. He has held positions as technical repersentative of the tions as technical representative of the again in New York; and as assistant to the manager of the Technical Service Department. Most recently, he served as Western sales manager of the Chicago office. Among his achievements in the chemical field are patents on the generation of chlorine dioxide and the manufacture and use of sodium chlorite.

It was also announced that Harry P. Smith has been appointed New York District sales manager, a post formerly held by J. B. Peake, who continues as an assistant general manager of sales. A graduate of Columbia University Mr. Smith was treasurer, vice-president, and president of the George Chemical Co. before joining Mathieson.

Correction

In announcing the new travel plant for mixing bituminous material of Hetherington & Berner in the February issue of THE AMERICAN CITY the equipment was referred to as the Moto-Planer. This should have been designated as the Moto-Paver and the paving speed given as 4 to 5 feet per minute should have read 4 to 50 feet.

Wallace & Tiernan Honors Two 25-Year Men

The Diamond Club of Wallace & Tiernan Co., Inc., Newark, N. J., honored recently two members of the organization on their completion of 25 years with the company.

James B. Kinney, manager of Wallace & Tiernan Ltd., Toronto, joined the organization as a field engineer in 1920 operating from the Newark office. Subsequently he was appointed district manager for Eastern Pennsylvania with headquarters first at Pittsburgh, then Harrisburg, and later Philadelphia. In 1932 he assumed the management of the Canadian organization and has served in that capacity since.

Harold F. Davis, district manager, joined Wallace & Tiernan as district engineer operating from Newark after serving as engineer in Charge of Buildings and Grounds at the Roanoke College. In 1921 he was transferred to Atlanta, Ga., and later in 1926 assumed the management of the Charlotte office in which capacity he had charge of all activities in the Carolinas.

Underwood's First 50 Years of Progress

The Underwood Corporation, One Park Ave., New York, N. Y., has just celebrated its Golden Anniversary and has issued a 34-page brochure showing founders, officers, and many of the employees about whom President L. C. Stowell says: "It is due, in a large measure, to the loyalty and craftsmanship of men and women such as these, and the inventors and business men who devoted themselves to serve the world of business, that Underwood can celebrate its Fiftieth Anniversary."

The Underwood Corporation, which formerly was the Underwood Elliott Fisher Company, is the world's largest manufacturer of typewriters, and in its works in Hartford, Bridgeport, and New Hartford, Conn., produces adding and accounting machines as well as all styles of typewriters. A factory in Burlington, N. J., manufactures carbon papers, ribbons, and other office supplies.

4,000,000 GALLONS PER DAY from a typical Ranney Collector located on the Bank of the Ohio River with pump house above Flood Level.

RANNEY METHOD WATER SUPPLIES INC.

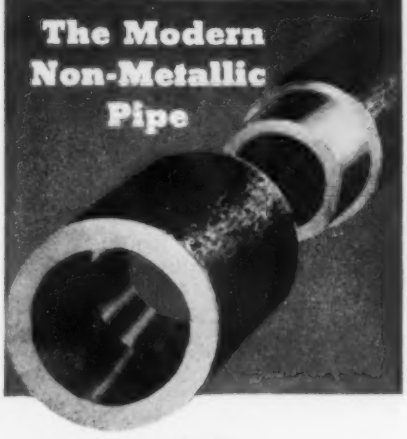
HEYBURN BLDG., LOUISVILLE, KY.

WATER SUPPLY ENGINEERS & CONTRACTORS

ORANGEBURG
The Root-Proof Pipe

Millions of Feet In Use

The Modern Non-Metallic Pipe



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- **CONDUCTOR AND IRRIGATION LINES**
- **INDUSTRIAL WASTE DRAINAGE**
- **SEPTIC TANK FILTER BEDS (Perforated Type)**
- **FOUNDATION DRAINS (Perforated Type)**

ORANGEBURG is the modern pipe in wide use throughout the country, meeting the need for an economical, quickly installed, trouble-free pipe for lifetime service.

ORANGEBURG PIPE is constructed of materials which have established records covering 50 years of successful underground service in ORANGEBURG electrical conduit. TAPERWELD* COUPLINGS are permanently watertight and root-proof. The pipe does not corrode or tuberculate.

WRITE for bulletins giving physical characteristics and chemical properties. THE FIBRE CONDUIT CO., DEPARTMENT A, ORANGEBURG, N. Y.

*Reg. U. S. Pat. Off.

ORANGEBURG
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The Root-Proof Pipe

BIRD-WHITE TOWERS

Offer Low Initial Height with Extreme Elevations

Towers can be installed on present trucks to meet your requirements. Perfect for heavy line work, street light, signal maintenance and tree trimming.

Our engineers will welcome an opportunity of assisting you with your tower problems.

PATENTED

Bird-White offers you a modern, rugged, dependable tower lift without the prohibitive initial and maintenance costs. Simplicity of design and unique construction make this hydraulic tower lift the last word for all overhead work.

Can be adapted to streamlined trucks as well as open back utility and general maintenance trucks.

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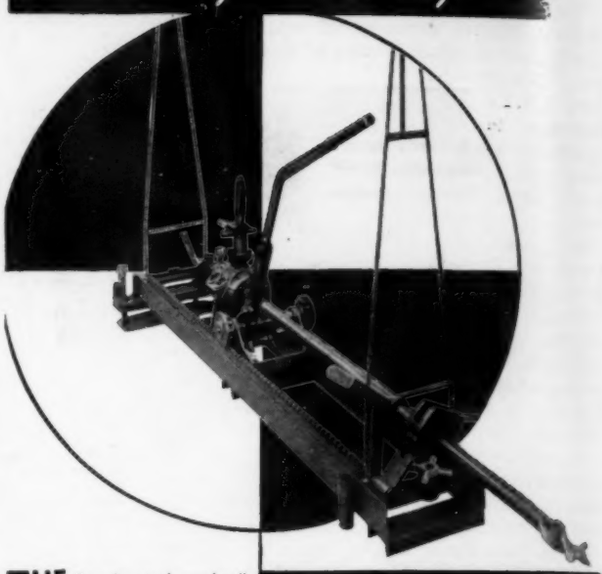
DEPT. AC, 3119 W. LAKE STREET, CHICAGO 12

"ON TARGET ACCURACY" *in Underground Boring!*



THE "mechanical gopher" is aimed just like a transit. Its sighted accuracy gives true directional horizontal bores with misalignment errors of less than 1%. Saves pavement cutting, backfilling, repairing and traffic hazards.

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CORPORATION LTD.
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How much space, time and money— to bring our cities up-to-date?

——Now . . . a step by step program for city planning that meets modern needs for beauty, utility and growth

How much space, time and money is necessary for building more orderly cities, more convenient cities, for eradicating slum sections and making offices, factories and homes better to work and live in? This book surveys all the problems along the way —economics, politics, administration, finance, and design—and outlines a practical, step by step program for solving them, in an amazingly sound plan.

Just Published!

NEW CITIES FOR OLD

City Building in Terms of Space, Time and Money

By Louis Justement, Architect, Washington, D. C.

232 pages, 7 x 10, 69 illustrations, $4.50

Will city planning work? This author says yes, points the way for integrating responsibilities of economists, public officials, realtors, architects, builders, bankers, lawyers, labor leaders and politicians.

Tells how

—we can realize all advantages of genuine city planning while providing full scope for private enterprise and individual creative ability.

—we can create a consistent demand for new housing, maintaining a high level of production over an extended period of years, without huge public expenditures.

—the program should be financed, from a careful consideration of possible methods.

• Find out just what type of city planning is aimed at; read and see described with maps and photographs how a particular American city could be improved, with a more convenient traffic system, with public buildings, housing and shopping facilities designed for better living.

Can a planning program be carried out without graft and corruption? How will business react — will home-owners give the program the go signal? Find the answers to these and many other practical considerations in this amazingly realistic book.

Send for a copy 10 days on approval

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Executive Appointments at Great American Industries, Inc.

Albert A. Frank has been appointed vice-president of Great American Industries, Inc., and general manager of Ward LaFrance Truck Division, Elmira, N. Y., manufacturers of commercial motor trucks, fire apparatus, trackless trolley coaches and motor coaches. A. Ward LaFrance, founder of the company, has retired from active management of the division, but will remain as vice-president of Great American Industries, Inc., and a member of the board of directors.

Albert A. Frank

Mr. Frank's career in the automotive industry started in 1921 with the Rickenbacker Motor Co., Detroit, Mich. In 1925 he joined the Chrysler Corp., where he participated in various divisional accounting, manufacturing and sales activities, and in command of the Chrysler Motor Parts Corp. In 1943 he joined Ward LaFrance as sales manager, and during the war had charge of all the division's contractual relations with the War Department. Prior to his recent appointment, he was general sales manager of the truck division.

Other executive appointments include E. M. Hoefle, general sales manager; C. W. Wiley, domestic sales manager; R. L. Harmon, export sales manager; N. G. Bjorck, chief engineer; R. L. Moody, factory manager, and R. M. Bingham, production superintendent.

Sterling Engine Appoints Assistant to President

Commander Russell J. Roberts, U. S. Coast Guard, has been elected assistant to the president of Sterling Engine Co., 1290 Niagara St., Buffalo 13, N. Y., to succeed Edward M. O'Connor, who retired January 1st. Commander Roberts is now on terminal leave and has resigned his commission with the Coast Guard to accept this appointment.

R. J. Roberts

Commander Roberts was graduated from the United States Coast Guard Academy in 1930. In 1935, after varied assignments at sea, he became ship superintendent in charge of construction of the coast guard cutters "Hamilton" and "Spencer" at the New York Navy Yard.

Early in the war, he was assigned to Coast Guard Headquarters, Washington, as chief of the Internal Combustion Engine Section and was in charge of all engineering details for the largest patrol boat construction program ever undertaken by the Coast Guard. Later, in Washington, he was chief of the Repair Division.

Commander Roberts' long experience in marine engineering, boat maintenance and design will make his engineering knowledge available to Sterling customers, boat builders, and naval architects planning new projects.

Tatlock Joins Consulting Firm

Lt. Col. Myron W. Tatlock, who served for the last two years as public works and utility officer with military units in France, Belgium, and Luxembourg, engaged in the restoration of destroyed utilities, has become affiliated with the Ralph L. Woolpert Co., Consulting Engineers, 132 No. Main St., Dayton 2, Ohio, where he will handle municipal phases of their work.

Col. Tatlock was formerly superintendent of Sewage Treatment for the city of Dayton, Ohio, from Jan. 1928 until Dec. 1945, following his return from Europe. Since 1936, he had also conducted a private consulting practice.

Time-Tested for DURABILITY

Calcium chloride curing for concrete pavements is a reliable, economical and automatic curing method that speeds the work. It permits opening to traffic much sooner and adds to durability and wearing quality.

23 Years Old

This concrete road near Harrisburg, Pennsylvania, was constructed in 1923. Two pounds of calcium chloride per bag of cement were used in the mix. It is in very good shape today.

22 Years Old

Surface cured with calcium chloride in 1924, this Ohio road is in good condition today. Proper curing is important for durability of concrete.

20 Years Old

Integrally cured with calcium chloride in 1926, this concrete highway in Maine gives good service today with a relatively small amount of maintenance.

19 Years Old

Surface cured with calcium chloride in 1927, this New Hampshire pavement goes on performing the work for which it was constructed —traffic service.

CALCIUM CHLORIDE ASSOCIATION, 4145 Penobscot Bldg., Detroit 26, Mich.

CALCIUM CHLORIDE for BUILT-IN CURING

Why a BG Ditcher can cut through hard material

● Just as a milling head steadily cuts through a piece of steel, so does the Barber-Greene Ditcher mill through tough materials. The closely spaced buckets, each taking small, even bites, travel at a high rate of speed, giving a milling action against the digging face. The vertical boom, exclusive with Barber-Greene Ditchers, causes the buckets and digging teeth to pull straight up against the work.

Frozen ground, coral rock, caliche—these are some of the hard materials through which Barber-Greene Ditchers have successfully and economically cut.

Catalog 44 describes and illustrates the many mechanical features and models of these versatile ditchers. Obtain a copy from your Barber-Greene distributor or write direct to Barber-Greene Company, Aurora, Illinois.

46-3

BG Barber-Greene CONSTANT FLOW EQUIPMENT

LOADERS • PERMANENT CONVEYORS • DITCHERS • PORTABLE CONVEYORS • FINISHERS • BITUMINOUS PLANTS • COAL MACHINES

Ohio Brass Makes Organizational Changes

Charles K. King, president of the company since 1928, was elected to the newly created position of Chairman of the Board of The Ohio Brass Co., Mansfield, Ohio, by the board of directors recently. He was also chosen chairman of the executive committee. George L. Draffan, executive vice-president since 1938, was elected president succeeding Mr. King.

Geo. L. Draffan

George L. Draffan, who entered the company as assistant advertising manager in 1916, was made general sales manager in 1927, secretary and director of sales in 1930, and executive vice-president in 1938.

R. B. Black, a member of the board of directors since 1930, was appointed to the executive committee. K. V. Farmer, Canadian Ohio Brass Co., Limited, a wholly-owned subsidiary of which he is the manager, was elected vice-president.

Others elected by the board are: H. S. Black, senior vice-president; L. W. Olson, vice-president; J. M. Strickler, vice-president; W. A. Springer, secretary and treasurer.

For the last 53 years Mr. King has had an active part in operating and controlling the company. In 1893 he joined the organization as manager of the Electric Railway Department and since then has been vitally interested not only in the welfare of the company but in the entire electrical industry.

A branch office at 1317 New York Ave., Washington 5, D. C., was recently opened by the Ohio Brass Co. with E. W. Leahey in charge.

Mr. Leahey, recently discharged as a lieutenant colonel, had been connected with the Philadelphia office since 1937. This new office covers Maryland, District of Columbia, Virginia, and part of West Virginia.

Colored Lights Indicate Changes in Liquid Level in Tanks

Changes in liquid level are signaled electronically by a compact unit offered by the Lumenite Electronic Co., 407 S. Dearborn St., Chicago 5, Ill. Connected with the Feratron Electronic Control Unit are two stainlesss steel electrodes which extend into the tank—a short one for high level and a long electrode for low level. When liquid level in the tank rises beyond "normal," the gong rings and a red light goes on; when the liquid falls to normal the gong rings and an amber light light goes on; below normal level the gong rings and a green lamp lights. The unit will operate as far as fifty feet from the tank, and only four wires make the connection.

Keasbey & Mattison Appoints Distributors

Thompson Materials Corp., 204 West St., New York 13, N. Y., and Belleville 9, N. J., has been appointed distributors for K&M asbestos corrugated roofing and siding, and flat asbestos-cement industrial structural sheets. Announcement was made recently by Keasbey & Mattison Co., Ambler, Pa.

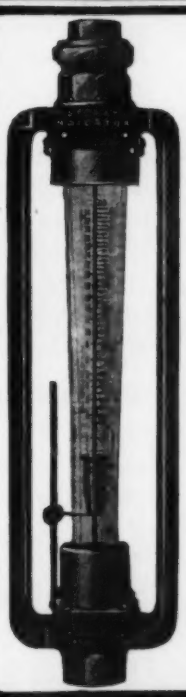
Carl C. Magee Is Dead

Carl C. Magee, who died on January 31, 1946 at the age of 73, should be remembered by the public and municipal officials for introducing the parking meter.

He sensed the value of staking off the curb with coin meters 20 feet apart, devised a parking meter, got it built in quantity, and obtained approval for a full-scale installation and tryout in Oklahoma City in July 1935 (see THE AMERICAN CITY for August 1935).

Mr. Magee established the Dual Parking Meter Co., now owned by the Union Metal Mfg. Co., Canton, Ohio. A little over a year ago he announced the formation of the Magee-Hale Park-O-Meter Co., Oklahoma City, Okla., with G. A. Hale as vice-president.

Invaluable!



• In making a *complete* test of a water meter you should know the volume of water, the meter registration caused by this volume, AND the rate of flow in gallons per minute at which test was made.

• The Ford Testerate Indicator will show this rate of flow instantly and accurately. For complete meter testing it is truly invaluable.

• Information for the asking.

FORD
Meter Box Co.,
WABASH, INDIANA

INSTALL NEW SEWERS . . .

HAVE
"BUSINESS AS USUAL"

You can forget about closed streets and the delays, hazards and inconvenience of trenching when you use ARMCO Tunnel Liner to install new sewers. The work moves quickly and economically and business above ground continues as usual.

Fast tunneling is the rule with ARMCO Liner Plates. Even inexperienced crews can install them quickly. One man easily handles the lightweight steel sections, bolting them together with regular wrenches.

And you buy *sinewy strength*—not bulky pounds. This means less excavation; also storage requirements are smaller. You gain added safety, fire protection, and experience shows that ARMCO Plates cost less to carry a given load than any other type of tunnel lining.

Consider tunneling that next sewer job with the aid of ARMCO Liner Plates. Motorists and property owners will thank you and the chances are you'll "hole through" ahead of schedule and under the estimate. Write today for complete facts. Armco Drainage & Metal Products, Inc., and Associated Companies, 1455 Curtis St., Middletown, Ohio.

ARMCO

TUNNEL LINER PLATES

Thirteen of Bayonne's thirty-two Harley-Davidsons, lined up for inspection. In the group, from left to right are Dealer William Jacobs, Deputy Chief J. J. McCarthy, Administrator Assistant Mike Griffin, Inspector Henry Lanktree, Sgt. Edward Jones and Lt. John Tierney.

32 HARLEY-DAVIDSONS do an Outstanding Job

Helping Solve Today's Increased Police Problems

THE busy shipbuilding and manufacturing center of Bayonne, New Jersey, is not only confronted with its own increasing problems of traffic control and law enforcement — but must be prepared to handle every situation which comes of its location in a great metropolitan area.

The successful record of the Bayonne Police Department proves the outstanding value of Harley-Davidson Police Motorcycles. Now, more than ever before, every community needs these dependable, efficient motorcycles — to extend police manpower — to prevent the terrific toll of traffic accidents from mounting higher — and to handle the ever-increasing demands of crime detection and prevention. No other method enables police departments to handle as great a range of work so efficiently and economically. Call in your Harley-Davidson dealer today and get complete information about the many advantages of Harley-Davidson Motorcycles for police duty.

HARLEY-DAVIDSON MOTOR CO., Milwaukee 1, Wisconsin

New Head for Link-Belt Sanitary Engineering Sales

Lt. Col. Joseph J. Gilbert recently returned to the Link-Belt Company to assume the job of Sales Engineer, Sanitary Engineering Division with headquarters at the Philadelphia plant. Mr. Gilbert was connected with the United States Army Sanitary Corps, and at the time of his release was assistant director of the Sanitary Engineering Division of the Surgeon General's office, Washington, D. C.

J. J. Gilbert

A graduate of the Towne Scientific School of the University of Pennsylvania in 1929, he joined the Link-Belt Co. at Philadelphia after fifteen months in the consulting sanitary engineering field. For four years he was employed in the engineering department designing Link-Belt equipment for water, sewage, and industrial waste treatment plants, and conducting special research work in this category.

In 1934 he was promoted to the engineering sales department to handle water clarification and sewage and industrial waste treatment equipment sales in the eastern territory.

Extinguishers Available

Various types and sizes of fire extinguishers which during the war have been scarce or produced only for the armed forces or war industries are again becoming available generally, according to G. H. Boucher, vice-president of Pyrene Manufacturing Company, Newark, N. J. Production of both the riveted shell and the seamless drawn shell extinguishers is reducing the back-log of soda-acid and foam-type extinguishers, and 40-gallon extinguishers on wheels are already being shipped immediately. Recharges for all types of extinguishers are available for immediate delivery.

Architects Reopen Office

Harold Stuart Jones, American Institute of Architects, and James M. Hunter, A.I.A., announce the reopening of their offices at 2049 Broadway, Boulder, Colo., under the firm name of Jones & Hunter, Architects. Lt. Hunter has just returned from naval service.

South Bend GUTTER-SNIPE

Pick-up Street Sweeper

MUNICIPAL SUPPLY COMPANY

Manufacturers

Street Sweepers
Street Flushers
Bituminous Distributors

SOUTH BEND 23, INDIANA

EXPORT DEPARTMENT, 44 Whitehall Street, NEW YORK 4, N. Y., U. S. A.

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Fresh, high quality broom fibres last longer

AFRICAN BASS FIBRES

INDIA PALMYRAH STALKS

The longer mileage you obtain from fresh broom fibres means less time-taking refilling of the broom core and valuable man-hours put to an extra use. The use of fresh, high-quality fibres in your mechanical sweeper is sound economy these days.

We are able to service every need in all types and sizes. We would be happy to receive your request for samples and quotations.

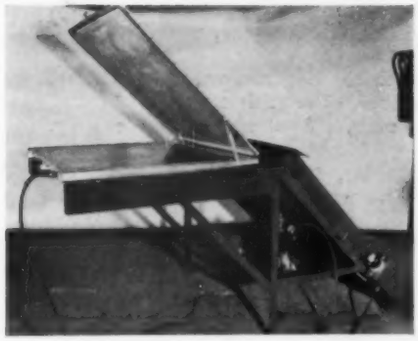
MOUNTAIN HICKORY SPLINTS

STEEL WIRE SWEEPER STALKS

The OTTO GERDAU CO.

Established 1872

82 Wall Street, New York 5, N. Y.



The new Scotchlite vacuum applicator that reflectorizes embossed signs in 3½ minutes

New Method of Reflectorizing Traffic Warning Signs

Minnesota Mining and Manufacturing Co., St. Paul 6, Minn., makers of Scotchlite reflective material, announces the development of a completely new method of reflectorizing every type of embossed traffic warning sign. This method will be of interest to all large communities that wish to transform outmoded, non-reflectorized signs into reflectorized signs that will help reduce accidents by giving all traffic warning signs 24-hour visibility.

The Scotchlite vacuum applicator reflectorizes signs in 3½ minutes by the use of atmospheric pressure on a diaphragm over an air-tight enclosure, molding the Scotchlite reflective material to every part of the sign surface. While intended primarily for applying Scotchlite to embossed signs, this applicator is said to be equally efficient on all flat surfaces.

Director of Advertising for De Laval

Palen Flagler has been appointed Director of Advertising and Publicity of the De Laval Steam Turbine Co., Trenton, N. J. Mr. Flagler was previously connected with the Philadelphia Division of the Bendix Aviation Corp.

Butler Mfg. Announces New Appointments

Oscar D. Nelson was named president and general manager of the Butler Manufacturing Co., 7348 East 13th St., Kansas City, Mo., succeeding E. E. Norquist, one of the founders of the business, who was elected chairman of the board.

Mr. Norquist, who had shaped steel tanks by hand, was first plant manager, then vice-president, and president. Mr. Nelson started as office boy in 1910 and was made assistant treasurer in 1917, treasurer in 1923, and general manager and treasurer in 1929.

Both men have seen the company expand from a sizable concern manufacturing steel stock tanks to one of the largest steel products companies of its kind with factories in Kansas City, Galesburg, and Minneapolis. Its other four divisions manufacture oil equipment, steel buildings including hangars, cleaners' equipment, and special products.

F. A. Rufi, secretary since 1927, has been elected treasurer. Glen C. Speakman, general sales manager, was elected a vice-president; C. C. Crouch, in charge of advertising and sales promotion, was re-elected vice-president. Roy S. Kemp, credit manager, was re-elected vice-president, as was John Nelson, who also was named a special representative of the company.

Darius Melcher, who joined the company in 1928, was named manager of the Minneapolis division at the directors' meeting. In 1938 he became assistant treasurer and manager of the Galesburg, Ill., division and he was elected to the board in 1945.

Versatility in Traffic Signals

A sectional traffic signal is announced by Southern Switch & Signal Company, Inc., Shreveport, La. It possesses a number of modern features which are increasingly demanded by municipalities.

"Unilight," Southern Switch's sectional traffic signal

For instance, a one-unit signal can be quickly changed to a three- or four-unit light by adding the needed units. Where traffic situations no longer require multi-unit signals, the "Unilight" sections can be removed and added at other locations where need is greater.

The sections may be turned separately to face any of four directions by one simple adjustment. A 90-degree turn of the visor allows the entire unit to be mounted horizontally without additional fixtures or fittings. The unit is quickly converted into a pedestrian signal by replacing the regular lenses with special "WALK" and "WAIT" lenses.

The hinged reflector allows complete inspection and servicing without use of tools. Lenses are sealed and the lamp socket is adjustable for focusing. The housing, of cast aluminum alloy, is a complete unit, and is dust and weatherproof. Snap spring holders on reflectors permit easy removal, while antiglare lenses prevent sun reflection.

Thus there is incorporated in one signal flexibility as to the number of an manufacturer and contractor of units and as to vertical or horizontal mounting with easy servicing.

Tube Bending Device

Glenn L. Martin Co., Baltimore, Md., has developed a new manual tool with which all kinds of small tubing can be curved to any desired angle.

The new tool consists of a steel base which may be used in a vise or clamped onto a bench; a revolving radius rod with a handle; a stop block grooved to hold the tubing; and a movable radius block which guides the tubing around a bend roll centered on top of the base. This roll, cylindrical in shape and also grooved, has a top plate scribed in 360°. A measuring point is marked on the movable radius block. The radius, holding block, and the roll are grooved so as to prevent crushing or change in section of the tubing.

Koppers Co. Purchases Wailes Dove-Hermiston

Koppers Co., Inc., Pittsburgh, Pa., recently acquired the entire common stock of Wailes Dove-Hermiston Corp., Westfield, N. J., according to a joint announcement by J. N. Forker, Koppers vice - president, and Linden Stuart, president of the Westfield concern.

J. N. Forker

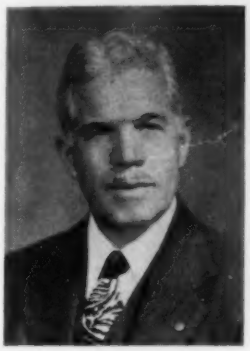
Koppers is a leading designer and builder of coke ovens and manufacturer of byproducts from coal, and Wailes Dove-Hermiston is a manufacturers and contractor of bituminous coatings for protection of iron and steel against corrosion. Wailes Dove-Hermiston will continue to operate as a separate organization with the same management.

Wailes Dove-Hermiston is a pioneer in this industry in the introduction of the coal tar pitch type of protective coating to the oil and gas industry and for water pipelines to protect against corrosion; first to develop the modern type of water works enamel; first to develop the rolling rig type of application of hot applied coating materials on the outside of large diameter natural gas pipelines. This method was standard for many years until the introduction of the modern type of line traveling coating and wrapping machines.

The company was also the originator of the method of applying hot coatings by the spinning process to the interior of iron and steel water pipe which has become standard and is incorporated in the American Water Works Association specifications. Also it is the originator of many new and novel cold applied coating materials suitable for protection against corrosion of all sorts of steel work and equipment.

Chicago Branch Manager for Littleford

Robert S. Arthur has been appointed branch manager of the Chicago office by Littleford Bros., Inc., 500 E. Pearl St., Cincinnati 2, Ohio. His headquarters are at 228 N. LaSalle St. and he will handle the complete line of Littleford Black-Top road construction and maintenance equipment.



Robert S. Arthur

Mr. Arthur has long been associated in the equipment field and his services and experiences will be available in the Chicago area.

Autocar Branch Office Opens New Building

The Oakland, Calif., branch of The Autocar Co., Ardmore, Pa., has just moved into a new building approximately 100 by 100 feet at 785 Seventh St. The new building contains a large display room and one of the most completely equipped heavy-duty truck repair shops in the area, and there is also a paved lot of approximately 8,200 square feet for outdoor servicing.

An important feature of this building is a "drive-in" arrangement whereby the largest trucks or tractors and trailers can enter the shop by one door, be thoroughly serviced, and leave by another door without requiring any backing or sharp turning. The Oakland branch is under the direction of J. H. Phillips, district manager for northern California.

Col. Tiller Appointed by Brown-Bevis

James H. Tiller, Jr., has been appointed manager of the Phoenix office of the Brown-Bevis Equipment Co., 4900 Santa Fe Ave., Los Angeles 11, Calif. Mr. Tiller, formerly southern district manager of Barber-Greene Co., and more recently Colonel in the Engineers Corp., U. S. Army, has had wide experience, particularly with black top equipment. As construction superintendent for the Canada Construction Company and assistant to the Division Engineer at Richmond, Va., he got to know materials handling equipment and its application in construction.

James H. Tiller, Jr.

In the army Col. Tiller was concerned with the use and maintenance of equipment, coming to Brown-Bevis from Fourth Army Headquarters, Fort Sam Houston, Texas, where he had charge of operation and maintenance of equipment.

Okonite Cleveland Office Changes Address

The Okonite Co., Passaic, N. J., announced recently that its district office in Cleveland, Ohio has moved to Room 625 Engineers Bldg., Cleveland 14. F. J. Dahleiden will continue in charge of the office which he has managed since its establishment in 1939.

Charles Blum Corp. Appointed by Kotal Co.

Charles Blum Advertising Corp., Philadelphia, Pa., has been named national advertising agent for The Kotal Co., 52 Vanderbilt Ave., New York, N. Y., according to a recent announcement. Harry M. Ellsworth is the account executive.

The Kotal Company manufactures a product which, when added to tar and asphalt makes it possible to lay roadbeds in the rain without keeping traffic off to allow for settling. This makes for quicker road surfacing even in winter weather.

ROADMASTER
Street Sweeper
WIRE

High Scleroscope Rating
Uniform temper.

Specially processed for high fatigue — against breakage. Long wearing. Conveniently cut and delivered in 100 and 200 lb. boxes. Prompt shipment from stock of all standard sizes.

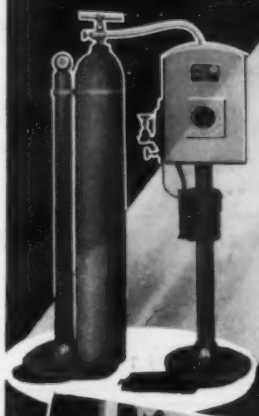
This gutter broom wire will prove an economy in your service.

"MORE MILES PER BRUSH"

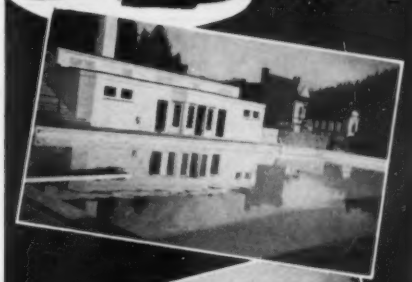
JOHNSON
Steel & Wire Co., Inc.
Worcester 1, Massachusetts

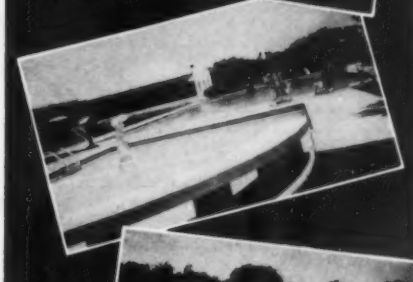
New York Akron Chicago Detroit
Los Angeles Toronto

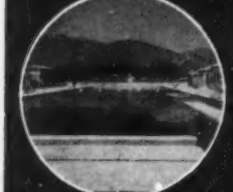
For QUALITY
SWIMMING POOL EQUIPMENT
Specify CHEMCO



CHEMCO TYPE M-3







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One-quarter Century of Experience
Planimetric and topographic maps, controlled mosaics,
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The complete job—photography—compilation—to finished survey.
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Organized to assist municipalities and public groups in utility valuations, rates, franchises, accounting and surveys.
John Bauer, Ph.D., Director
280 Broadway, New York City 7

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36 State Street Albany, N. Y.
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Specializing in the revaluation of municipalities for local tax purposes.
Illustrated brochure and moving picture film upon request
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BACK THEM . . . BUY BONDS

Mark well this button. It is worn by the men and women honorably discharged from the armed services. Though they are now in civilian clothes, let's not forget their service to our country and us. They still rate our every consideration.

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GENERAL LIBRARY
UNIV. OF MICH.
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The American City

SUPPOSE YOUR FAMILY WERE STARVING

The war's challenge to mayors and other community leaders is not yet over. Armed victory has been won—but peace is by no means assured.

This world cannot exist in peace half overfed and half starved. Hunger is a prime mover in political disorder. Widespread political disorder breeds war. War holds the threat of the atomic bomb over the heads of us all.

To local officials and citizens whose patriotic service helped to win the war, there is now an urgent call to new leadership. This call is for vigorous action in stimulating production through victory gardens and otherwise, and for drastic conservation, both rationed and voluntary, to increase greatly the shipments of wheat and fats and other foods to the starving peoples abroad.

If you want to help, read page 5 of this issue—and then act promptly.